Revolution in purchasing

Building competitive power through pro-active purchasing

Purchasing's Future Research Project

A report based on interviews with purchasing executives of leading-edge multinational companies and purchasing professionals in Europe and the United States.

Sponsored by Philips Electronics Purchasing, Eindhoven.

Professor dr Arjan J. van Weele
drs Frank A. Rozemeijer

Eindhoven University of Technology
Faculty of Technology Management
Purchasing Education and Research Unit
PO Box 513
5600 MB Eindhoven, The Netherlands
FOREWORD

Philips Electronics over the past years has successfully overcome the problems which it faced during the early nineties. At that moment the company in many of its business areas was confronted with increasing competitive pressure and declining growth figures. The company was, at that time, unable to respond to the rapid changes going on in its external environment. As a result a major restructuring took place, which took the company where it is now. Currently Philips Electronics is a major player in many of its markets with a sound financial structure.

The intent of Philips Electronics is clear: it wants to develop over the coming years into one of the world's 'Best-In-Class' companies. In its effort to realise this the principles of Total Quality Management are implemented relentlessly.

All our efforts are focused upon implementing a process of continuous improvement throughout the company and in all aspects of our business. We dedicate our quality improvement efforts first and foremost, as our recent corporate wide campaign 'LET'S MAKE THINGS BETTER!' illustrates, to our major partners in business: our customers, our employees and associates and, of course, our suppliers.

The starting point for upgrading the purchasing process throughout the company was marked by an intensive purchasing bench marking study, which indicated how our company in its different business areas, performed vis-a-vis our competitors. This study has provided many insights in how effective we are in the area of purchasing strategy and organisation. However, we wanted more. We also would like to get an insight in what is going on in purchasing nowadays. What are the dominant trends and developments affecting the role and position of the purchasing function? How do leading edge companies in the area of purchasing respond to these challenges? How would we compare to these leading edge companies?

These interests matched perfectly with the Purchasing's Future Research Project, which is conducted at Eindhoven University of Technology. For this reason we have supported this research project financially.

We compliment both researchers, Prof. Dr Arjan van Weele and Drs Frank Rozemeijer, for their valuable input into our process of bench
marking. We express our gratitude to both for their professional and enthusiastic approach and the way they executed this part of the research programme. Let's benefit from it in our attempt to become a Best-in-Class company.

Eindhoven, January 1996.

Piet Frints
Philips Electronics, Corporate Purchasing
Dept. Commercial Support / O&I
P.O. Box 218
5600 MD Eindhoven
Tel.: +31 40 2787691
Fax: +31 40 2787640
PREFACE

Purchasing and supply management has been a subject of academic research at Eindhoven University of Technology since 15 years. During that period we have been able to watch and describe the major developments going on in this business area at prominent manufacturing industries within Europe and particularly within the Benelux countries. Based upon our observations of actual practices it has been and still is our goal to develop new concepts and present fresh ideas to practitioners and researchers which may help to make purchasing and supply operations in practice more effective.

It is no secret that over the years large differences in the area of purchasing and supply strategy have emerged between the so-called 'leading-edge' companies and the companies in the rear. Within manufacturing industry the gap between both groups of companies has grown bigger and bigger. This is not without concern, since many of these leading edge companies do not operate from an European base. Rather, these are operating from the Far East and the United States of America.

Through the 'Purchasing's Future Research Project' at Eindhoven University of Technology we systematically want to describe and analyse best practices in purchasing and supply management. Our objective is not that other companies relentlessly should pursue or imitate the practices found at best-in-class companies. Neither is our objective to develop the next 'recipe-for-success' in our profession. Rather, we hope that a thorough description of the purchasing and supply practices of leading-edge companies may serve as a warning to those who are lagging behind. And, secondly, that these may serve as a source of inspiration.

We are grateful that, in a time where the Dutch government increasingly is putting strain on academic research budgets, large companies are willing to participate in our research programs. In this part of our program the interests of Philips Electronics and our Purchasing Management Education and Research Unit appeared to be similar. Thanks to the financial support of Philips Electronics we were able to conduct this study.

We are grateful to all the companies and managers who were able and willing to receive us. Without exception discussions were open; much information, opinions and ideas were gained during our visits. Although we checked the appropriate sections
in the report with the respective companies and we have gotten their approval for publication, we hope that we have stated their views and ideas in a correct way.

At this place we also want to thank John Bornebroek, Piet Frints and Willem Reddering, Philips Electronics, Corporate Purchasing, for their active support and their constructive attitude throughout the research project. We also express our gratitude to Frans Wishaupt, who as a Director of Corporate Purchasing, started the project but due to his leave to Philips Light Division was not able to see it finished. Finally, we like to thank also Will Janssen and Peter Burgers from Philips Print Purchasing and Production, for their professional support in actually producing this book.

We hope that this report may contribute to a better understanding of the changing role of purchasing management in the next decade and we hope that it may serve as a source of inspiration for everyone who reads it.

Arjan van Weele
Frank Rozemeijer

Eindhoven University of Technology
Faculty of Technology Management
Purchasing Education and Research Unit
Paviljoen J-3
PO Box 513
5600 MB Eindhoven

Tel.: 31-40-2473841
Fax: 31-40-2465949
MANAGEMENT SUMMARY

I Revolution in the business environment

The context in which manufacturing companies operate is undergoing radical changes. The next decade will show a revolution in business, which will dramatically change the nature of competition.

Revolution number one is the globalization of trade. Over the past few years competition has intensified all over the globe due to deregulation, the emergence of new trade zones, the volatility of currency exchange rates, improved transportation and sophisticated information technology. Today, Japan is the only Asian country in the G-7. It is expected that in the early 21st century there will be five Asian countries in the top ten economies of the world. This will, beyond doubt, shift the traditional tradepatterns between nations.

Revolution number two is the coming of the Information Society. Information technologies have become the main avenue to revitalize mature businesses and to transform them into new ones. Modern information technology enables mass customization, rapid consumer response, pay for production, zero inventories and closely coupled relationships between organizations that are held together electronically. Network structures and their electronic implementation may well be the most important elements of business strategy in the next decade. This is strikingly evident in the automotive industry, as we have noticed at NedCar, Philips Carsystems, Chrysler and Honda. Buyers increasing will shun suppliers from their business who do not offer electronic linkages, or who have inaccessible or incompatible information systems. Compared to the United States, EDI in Europe is just beginning to emerge.

More demanding consumers and continuously changing consumer preferences are responsible for revolution number three. The customer of tomorrow acts from an expanded concept of value that includes convenience of purchase, high quality, after sales service, uniqueness and so on. In the relationship with suppliers customers increasingly will take charge: they now tell manufacturers what they want, when they want it, how they want it and what they are willing to pay. Customers are not willing to pay for marginal technological improvements. This means that companies need to focus every part of their supply chain to focus on the interest of their customers.
To survive, the manufacturing industry has two options: continuous and drastic cost reduction or constant innovation. Most companies will have to pursue both strategies at the same time, however. A major question to answer is: 'How do we motivate our people and our suppliers to improve themselves continuously, and to generate new ideas for innovation?'. Companies that are not able to answer this question will also be unable to keep up with the competition.

2 Towards a service industry

It is becoming more common for large manufacturing companies to operate sophisticated services businesses. Manufacturers like IBM and Digital Equipment bring in more revenues from consulting and processing services than service companies like EDS. US automakers today make almost no parts themselves. It is an exaggeration, but not an outrageous one, to say that the Big Three (Ford, GM and Chrysler) are mainly design studios and marketeers. Nowadays, almost 75% of Chrysler’s employees are in non-manufacturing services like engineering, design, sales, purchasing, or distribution. The next wave of economic growth without a doubt will come from knowledge-based businesses, or services.

Companies that want to stay competitive in the late 1990s and beyond are being forced to narrow their business focus, not broaden it. In order to meet the contemporary demands of quality, service, flexibility and low cost, organizational processes must be kept simple, transparent, and focused on the customer. Companies must look at entire processes that cut across organizational boundaries. Work should be performed where it makes most sense. In the future managers, in most cases, will delegate responsibility to teams that might include people from many departments, who report to various bosses. The horizontal dimension (looking across territories to focus the effort of the organization on common goals to serve customers) is getting more important than the vertical dimension (what bosses in a single department tell people to do).

The desire for fat organizations that relied on redundancy, encouraged overstaffing, and could afford to waste talents of people on non-essential tasks, has been replaced by a preference for lean organizations with focused efforts. This explains the rising purchasing-to-sales ratio of many manufacturing companies including IBM, Xerox, Philips Electronics, and Alcatel. The point is that outsourcing more and more becomes a strategic issue, with great importance for the survival of the company.
New technologies and management information systems have dramatically shifted the balance between what pays to outsource and what can be produced effectively internally.

Companies become smaller, downsized through outsourcing, but reinforced by strong collaboration with other firms that were once called ‘supplier’, now ‘network partner’. This extensive outsourcing increases the dependency of suppliers, making supply management, or management of Best-In-Class supplier networks, a key success factor. Companies who are not capable of developing and managing this kind of network, will fail in the highly competitive environment of the future.

3 Global purchasing and supply strategies

In the new business environment Purchasing must bring increased skill and value to their companies. Purchasing must find a way to add value, or disappear. This has led to significant changes in the role and position of Purchasing in many leading-edge companies like GM, IBM, and Chrysler. In particular, this has resulted in the redefinition of primary purchasing tasks, responsibilities and competencies in the relationship with other departments. Over the last few years many international companies have slashed their centralized corporate staffs, whilst adopting a Business Unit structure. In doing so it seems that companies traded bureaucracy and lack of customer focus for ill-defined communication and lack of synergy. Today many companies have abandoned the pure business unit structure, and have moved to a center-led organizational structure. This structure is characterized by a clear direction, i.e. vision, from the top in combination with bottom-up entrepreneurship and decentral execution.

In discussing appropriate purchasing and supply strategies we differentiate between production and non-production buying. When we look at the production-related Purchasing & Supply strategies, we see process globalization. Leading-edge companies have a global competitive sourcing process which searches more and more for main suppliers with worldclass capabilities and global presence.

The issues leading-edge companies pursue to improve the global sourcing process are strong leadership, active involvement of line management, agressive supplier management, corporate commodity plans, cross-functional teams and supply standardization.
The corporate commodity plans are mostly drawn up by so-called cross-functional commodity teams. Such teams consist of professionals in functions such as product design, research and development, marketing, product distribution, and finance, together with purchasing professionals. The leader of the team will often be a person identified as a commodity manager, not necessarily a purchasing professional, who will report to the Vice President of Purchasing and to a Functional Line manager. The structure is usually virtual.

Another issue is the implementation of supply standardization. Many companies are starting to realize that there are a lot of commonalities between their businesses, and that they need to share that information. They can't afford not to do it in this competitive environment.

To enable the above strategies, companies are establishing worldwide information systems. Single worldwide databases with complete and current technical and commercial data of all available components, of preferred parts and approved suppliers, alternative suppliers, and specifications (with probably over 100,000 part numbers and hundreds of suppliers). Ford, IBM, Alcatel, Xerox and Chrysler are some of the companies that are working to establish these systems.

We also see a trend towards more attention for center-led non-production buying. Reengineering the buying process and application of modern purchasing practices can significantly reduce costs and improve productivity in this area. Some leading companies have found out that the amount of money spent on suppliers in the non-production areas far outweighs the amounts of money spent on production buying, and that the percentage covered by corporate contracts is very low. Companies today are packing once fragmented purchases of services and supplies into one or two company-wide contracts for each. High-volume purchasing can trim bills for services and MRO by 10% to 25%.

The corporate contracts are to be followed by all divisions and business units concerned, who should order from the relevant suppliers directly. The Purchasing Card, which is in use in many American companies nowadays, provides an efficient vehicle in this area.
Towards virtual structures in purchasing and supply

An ever more demanding competitive environment requires ever higher levels of corporate purchasing performance. The trouble is that performance improvements which are needed often remain out of reach for purchasing organizations organized in the traditional vertical fashion: hierarchically structured, functionally oriented. The crucial advantage of vertical organizations is functional excellence, but their central dilemma is coordination-across tasks, across departments, across functions. By contrast, there is real performance leverage in moving towards a flatter, more horizontal mode of organization, in which cross-functional, end-to-end work flows link internal processes with the needs and capabilities of both suppliers and customers.

A possible model for future Purchasing organizations to make simultaneous improvements in both increasing functional expertise and economies of scale, and improving focus and flexibility at the business unit level, could be the hard core/soft core organization. In this model a hard core of corporate Purchasing professionals is surrounded by a soft core of business specialists. The hard core is responsible for the Purchasing process, the strategy, professional development, and the recruitment, training and development of the people involved in the process. The soft core specialists are the real on-the-spot commodity managers, who have the authority to make decisions how one can best meet local needs. They reside in their own business units and are part of virtual purchasing teams.

Revolution required

Most Western leading-edge companies in the field of purchasing and supply management (IBM, Compaq, Xerox, Digital, and Chrysler) share a similar background. Most of these companies have gone through difficult times, in which the continuity of the company was in jeopardy. Stringent cost reduction was required for survival. Looking at their cost position and value chain, these companies decided to change their purchasing policies and strategies in a drastic way. New managers and staff were sent in, cross-functional teams introduced, local sourcing replaced by global sourcing, etc. All in all these companies took an aggressive, business-like approach to their purchasing decision making. We feel that the functional orientation towards purchasing and supply is the biggest barrier. Maintenance of the status quo and a more gradual, evolutionary
pattern of change in this function might seem more attractive to some, and many managers may be comfortable with it. However, those managers should realize that the changes we are confronted with now are of a discontinuous nature. When considering a reorientation of purchasing and supply operations we feel that a drastic move from the past may be warranted. In those circumstances revolution, and nothing less, will be required!
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Research Context
Chapter 1

Introduction

1.1 Introduction

Developments are going fast. Is the Purchasing function in despair? What are the overriding trends in leading-edge companies? Is the gap between leading companies and companies in the rear getting wider and wider? Is Purchasing really developing from a functional discipline towards a cross-functional activity? Is Europe behind the US? What are the drivers determining purchasing's development? Which management style is needed for the change? What happens to Purchasing organizations when we take all the slack out of the organization? These are some of the many questions facing purchasing executives these days. With this report we will try to provide some answers and of course add some more questions.

1.1.1 Background of this study

In a large number of businesses the purchasing-turnover ratio has increased strongly, through increasing concentration on core-activities. Many business activities have been sold, made independent, or have been outsourced to specialized suppliers. As a result companies become more and more dependent on their suppliers, suppliers are developing more and more into strategic resources. Their performances are of crucial importance for the (future) success of their client companies. Purchasing must add value to the bottom line and improve total quality; that is why suppliers should be competitive in all aspects of their business; quality, time of delivery, price and expertise. As a result purchasing and supply management, and particularly the way supplier-relationships are being managed for continuous improvement, have grown in significance.

New concepts in the field of purchasing, like outsourcing, supply-base management and value-chain management have become more and more common practice. Because of the cross-functional character of these concepts, the call for a strategic re-orientation of the purchasing function becomes louder and louder. However a clear future vision to guide the purchasing process has not matured yet. This is the main reason for us to engage in this 'Purchasing's Future Research Project'. Through this research project we investigate the most prominent developments and the expected trends in the
profession, as well as the role and position which purchasing probably is going to have in major companies ten years from now.

1.1.2 Goals

Our research project set out to answer the following questions:

- What are the dominant developments in the external environment, which affect the role and position of the purchasing function in major companies? We think of changes for example in:
  - key markets and buying behavior
  - competition
  - economic factors
  - technology.

- What are the dominant developments in the internal organization, influencing the role and position of the purchasing function. Here we think of changes in the field of:
  - management philosophy
  - business strategy and structure
  - quality- and logistic strategies
  - human resources management, etc.

- What are today's and tomorrow's most important developments in the field of purchasing processes, within Best-in-Class companies? Here we investigate changes in:
  - purchasing management,
  - outsourcing,
  - supplier management,
  - value-chain management and integration, etc.

Based on the insights drawn from desk research and interviews, we will describe the major expected developments that will affect the purchasing function. The research is expert oriented and has a predominantly qualitative character.
1.2 *Major dilemmas in purchasing and supply management*

There are some major dilemmas in Purchasing and Supply Management today, which business leaders need to solve. Here we make a distinction between Purchasing as a function and Purchasing as a process. First Purchasing as a function. Many companies are rethinking the role of Purchasing. Is purchasing only responsible for the buying or does it also have to be responsible for more strategic issues like supplier development and supply chain management?

This dilemma has direct consequences for the position of Purchasing in organizations. Companies are questioning whether Purchasing has to be organized centrally or decenterally, and to what extent. At the moment there are as many structures as there are companies. We see centralization, decentralization or both, but what is best given a certain situation?

Secondly, major dilemmas come up with regard to the purchasing process that should be expected. Many companies nowadays pursue a differentiated approach to their supplier relationships. What kind of supplier strategy is best given a certain situation: partnership or competitive bidding? Should companies pursue global or local sourcing? Currently there is much debate among purchasing practitioners about what supplier-strategies would be best: global or local sourcing, partnerships or competitive bidding, etc.

1.3 *Objectives*

The objective of the study is to provide answers to the following questions:

- Where will companies stand ten years from now in terms of markets and products, and how does that affect the organization?

- What Purchasing and Supply Management strategies and activities will companies emphasize over the next ten years? What can be the role of Purchasing in meeting their business strategies, and implementing these? What will be the position of Purchasing in the organization?

- What are the inhibiting factors for the future development of Purchasing and Supply management, and how do companies cope with these?
• What will the future relationship between design, engineering, manufacturing and purchasing look like?

• What will happen to Purchasing jobs in the future?

• What can companies tell us about specific Purchasing topics such as:
  • Consortium buying
  • Training programs
  • Buying of software
  • Use of power in supplier relationships.

1.4 Scope and limitations of this study

This report is divided into three parts. In Part 1, we present the research context. In Part 2 we will describe the changing business context companies are confronted with these days. Part 3 tries to integrate the findings into a theoretical purchasing framework that contains the most important changes for the purchasing function and its processes for the next decade.

Some final remarks should be made to conclude this introduction. The reader of this report should bear in mind three important limitations of this study.

1) First, he should be aware of the rather small number of observations. The authors consider the companies which have been visited, to belong to the leading ones in the field of purchasing management, but so are other companies! For example Japanese companies. If time and money had allowed, their creative and challenging ideas might also have been incorporated in this report. However, they were not.

2) Secondly, all our observations have been made in the United States, Canada and Europe. Different environmental and cultural conditions make any generalization of the results of this study as applying to other geographical areas a difficult and rather arbitrary matter.
3) Thirdly, each of the visits was, in fact, too short to cover all the prepared topics in equal depth. This was partly due to the way in which we let the purchasing executives talk freely about their job and about the topics which were most important to them.

1.5 About the authors

Prof. dr Arjan J. van Weele is part-time professor at the Faculty of Technology Management of Eindhoven University of Technology. There, he holds the NEVI-chair of Purchasing and Supply Management. He is the author of many books and a large number of articles about strategic and organizational problems in the field of purchasing and supply management. As a director he is responsible for the logistics and purchasing consulting activities of Holland Consulting Group, a specialist management consulting firm, located in Amsterdam, The Netherlands.

Drs Frank A. Rozemeijer studied Business Administration at the University of Amsterdam. His special areas of interest are strategic management, industrial organization in general and outsourcing relationships in particular. During his study he has written articles on subjects like: the evolution of strategy formulation, Total Quality Management, flexible specialization, and outsourcing. After his graduation his book about managing outsourcing-relationships (Dutch text) was published on behalf of a leading industrial maintenance services company in The Netherlands. Presently, he works both as a lecturer and researcher at the Purchasing Education and Research Unit, Faculty of Technology Management, Eindhoven University of Technology.
Changes in Business Context
Chapter 2
Changes in the international business environment

2.1 Introduction

The context in which organizations now have to operate is undergoing radical changes, which require a fast response. We all sense that the changes surrounding us are not mere trends but the result of large, unruly forces like the globalization of markets, the rapid progression of information technology and computer networks, the increasing importance of services in our economies, and major changes in customer behavior. All these changes happen at the same time - and changes are going fast. They cause one another and affect one another. Doing business will never be like it was. The next decade will cause a revolution in business, which will change the nature of competition dramatically (Hammer, 1993; Peters, 1992).

The message is clear: business is changing, but to what extent? In what way? What are the consequences? What are the challenges large companies are confronted with? And how will they impact Purchasing and Supply strategies? These are the issues we will address in this chapter. We start with a description of the most important revolutions that are going on in our competitive environment.

2.1.1 Globalization of trade

Revolution number one is the globalization of trade. Competition has intensified all over the globe in just the past few years, mainly due to deregulation, intercultural homogenization, the forming of trade regions (GATT, EEC), improved transportation and sophisticated information technology. Especially the latter enables people - for the first time in history - to overcome the barriers of physical distance and differences in age, education, and religion. It will also challenge or redefine commonly accepted notions of nation states, company, industry, and community. In short, technology is making traditional borders obsolete, the world increasingly is becoming a ’global village’ (Ohmae, 1995).

Distance is disappearing as a limiting factor in all business operations (see box 2.1). Thanks to the new information and logistics linkages, businesses are relocating and reconfiguring their activities into global value-added chains, based on least cost and greatest expertise. Globalization is easiest for products with high value-to-weight ratios, like semiconductors, but with the aid of logistics systems globalization it
is occurring in all businesses. Federal Express, DHL, and UPS are battling to be leading in this global logistics area, and are likely to develop into powerful companies in the future (Davis, 1991).

Apart from global logistics systems, tariffs on trade play an important role in determining global trade flows. Post-war tariffs under GATT have gone down to an historically all-time low level. Some developed countries have even established free trade regions, like EEC (Europe), NAFTA (US, Canada, Mexico) and the 'Yen bloc', that includes the Asian nations. These three regions will shape the world economy well into the twenty-first century.

Companies that follow a global strategy are able to spread their value activities (like purchasing, production, logistics, marketing and R&D) over different countries in such a way that a comparative advantage per activity is gained over companies that don’t spread their value activities over different countries (see for example box 2.1 and 2.2).

Box 2.1  **Nortel’s Internationalization**

Canadian telecommunications giant Northern Telecom (Nortel) is reorganizing its headquarters and manufacturing operations.

In recent years, the company has been reorganizing its manufacturing operations worldwide in order to increase sales to overseas markets, which have increased from $784 million in 1990 to $2.6 billion in 1994.

Customer sales in Canada now represent just 13% of worldwide revenues - a 45% decline since 1990. The signing of the Canada-US Free Trade Agreement put pressure on Northern Telecom’s margins on its switching products, traditionally its core business. Unions for Nortel’s Canadian employees have long complained that the company has transferred jobs from high-wage, union plants in Canada, to low-wage, non-union facilities outside the country. The company now operates a non-union, switch-manufacturing facility in North Carolina and has set up manufacturing operations in China.

(Source: Mississauga Business Times, July/August 1995, p. 1)
Box 2.2  Global Company

Some Japanese companies have already become 'global' in that their R&D is networked, involving American and Asian scientists; their design concepts are detailed by low-cost Indian engineers in Bangalore or Bombay and then switched over to Singapore; their components are produced in Taiwan and shipped to Tianjin for final assembly and inspection; and then final products are sold in Europe and North America (Ohmae, 1995).

As the boundaries to commerce open up, new rivals are coming after your home market just as hard as you're going after theirs. The best performers are driving out the inferior, and niche competitors change the markets (Hammer, 1993). But we 'ain't seen nothing yet'. In the past five years the commercial world has been swelled by the former Soviet empire, China, India, Indonesia, and much of Latin America - billions of people stepping out from behind political and economic walls (Stewart, 1993). A few years ago it was impossible to open a McDonald's restaurant in Moscow, now the question is how many restaurants you need to serve the Moscow market (Witteveen, 1995). And there is more to come. By the early twenty-first century it is expected that there will be five Asian countries among the top ten economies in the world. Today, Japan is the only Asian country in the G-7. It will soon be joined in a new G-10 by India, Indonesia, China, and Korea (Ohmae, 1995). However, for some countries this will take some time due to cultural differences, as we can read in box 2.3.

Box 2.3  Chrysler in China?

In 1992 the automobile manufacturer Chrysler began negotiating to build a mini-van plant in the southern Chinese province of Guang-dong. But the Chinese wanted Chrysler’s proprietary technology. Said Chrysler President Robert Lutz: 'These were completely unacceptable conditions, and I don't think any sane automotive producer would have accepted them. Chrysler broke off discussions in December. Companies have to be very careful in China, because they have a reputation on counterfeiting of software and CDs. Why not cars in the future? This 'pirating culture' will not end overnight, it will take some time. It is really up to the Chinese. If they want heavyweight companies to continue setting up shop, they'll have to play fair'.

(Source: Fortune, April 3, 1995, p17-18)
Some future watchers see in the year 2000 a golden triangle of free trade between Europe, America and Asia. One global market with free trade for goods, services and capital (Naisbitt, 1990). Some expect that the major players on that market will be 1 billion dollar mega-enterprises. These enterprises are federative networks in which every company retains its independency, but in important areas (like purchasing, distribution, etc.) acting like one mega-company (Eilander, 1994).

2.1.2 The Information Society

Revolution number two is the coming of the Information Society. What we are witnessing today is something fundamental. This sea change has been described as the Digital Revolution, the Multimedia Revolution, or the Information Superhighway. While these terms can be somewhat misleading, it is clear that mastery of information technologies is crucial to competitive advantage in the Information Age (Ohmae, 1995).

Information technologies are the core of today’s economy, and to survive all businesses must 'informationalize'. The point is that the economic value from generating, using, and selling information is growing significantly faster than the value added by providing traditional goods and services (Davis, 1991). Information-based enhancements have become the main avenue to revitalize mature businesses and to transform them into new ones. Information is a survival tool to older generation businesses; it results in better costs and controls, better service, and new business opportunities (Davis, 1991).

Among other things, the new Information society means embracing a world of customer self design, mass customization, rapid response, on-demand manufacture, pay for production, zero inventory, and closely-coupled relationships that are held together electronically. To design, produce, deliver, and also finance products in real time requires that all links in the business chain be tied very closely together. Suppliers, manufacturers, distributors, and retailers may still exist as independent companies but the interdependencies among them may become so total that the concept of an arm’s-length relationship may disappear completely. Intimate electronic linkages to independent parties will characterize informationalized firms.

Networking and its electronic implementation may well be the most important element of business strategy in the next decade, and it is nowhere more evident than in
Networking is simply the set of relationships you create and maintain, with for example suppliers, distributors, and customers, to manufacture and market your product. Your profile of electronic capabilities - including hardware, software, communications, data formats, and other infrastructure elements - will increasingly drive business performance by determining with whom you can link. Buyers will increasingly shun suppliers who do not offer electronic linkages, or who have inaccessible information systems (Davis, 1991).

2.1.3 Changing consumer patterns

The modern, very demanding consumer is responsible for revolution number three. In the past customers judged the value of a product or service on the basis of some combination of quality and price. Tomorrow's customers, by contrast, have an expanded concept of value that includes convenience of purchase, after-sale service, dependability, uniqueness and so on (Treacy, Wiersma, 1993).

Following the sharp rise in prosperity, service and comfort, quality and fast delivery become as important for customers as price. Increasingly, customers are demanding quality products more tailored to individual needs and tastes (Kumpe, 1988). During the 1990s, the well-informed and highly educated customers are more aware of their purchasing power, and exhibit more critical buying behavior. We see the empowerment of the customers against remote and irresponsible organizations. In essence, people will no longer settle for whatever companies are offering. Instead, they will seek out and command their first choices in products and services. Customers take charge; they now tell suppliers what they want, when they want it, how they want it and what they are willing to pay. They demand products and services designed for their unique and particular needs. From a company point of view it changes from the customer to this customer (Hammer, 1993).

Says John Gillett of IBM: 'I see more Sophistication of the customer, and with that more Knowledge, and with that more Ability to perceive differences, and with that for companies the Opportunity to differentiate from others, which is wonderful'. With a differentiation strategy companies can escape the price competition.

Besides this there is another development in consumer patterns, which seems a little paradoxical: on the one hand we see a need for differentiation to the level of individuals within a country, on the other hand we see growing similarities in lifestyles and
preferences between countries (cultural homogenization). Companies answer this paradox by 'thinking globally, and at the same time, acting locally'. In other words: use the economies of scale of a brandname globally, but adjust advertising and distribution to local differences (Nooteboom, 1994). Examples of this are Coca-Cola, consumer electronics, cars, etc.

2.1.4 Changing economic parameters

Many companies have the commitment to manufacture where they sell, and to purchase where they manufacture their products. In buying from overseas locations, cost is inevitably accompanied by currency exchange. Drastic changes in the currency balance may create opportunities for suppliers in some countries to become very competitive in the exports of their products. In the past years the Japanese yen appreciated with 10%, and the German mark with 5% against the US dollar. This has had its effect on trade between the countries involved, because worldwide trade is counted in US dollars. Some sources expect the US dollar will continue to depreciate over the next ten years against the DM and yen (see also figure 2.1).

Figure 2.1  Yen and USD against DMarks
Apart from exchange rates, inflation, economic growth and interest rates have a large impact on sales, purchases and the future financial position of the company. And with that, also on the competitive position of the company. The past years we have seen an increased volume of sourcing in the Far East. For example, NedCar reduced its number of Dutch suppliers for the new Mitsubishi and Volvo models from 90 to 24 (van Weele, 1994). The three main economic drivers behind the sourcing in the Far East and Eastern Europe were:

- lower labor costs,
- substantially higher economic growth rates,
- currency exchange rates, and financial volatility.

The Japanese economy has grown rapidly since the Second World War. Much of the stimulus for this growth has come from the dynamic expansion of the country's exports of manufactured goods (Ethier, 1988). Since the 1960s a small group of less developed countries (the Newly Industrializing Countries or NICs: Brazil, Mexico, Taiwan, Hong Kong, Korea, Singapore) has been rapidly expanding their own exports of simple manufactured products, in apparent emulation of the Japanese pattern. First in textiles and clothing, then in other sectors, including more recently automobiles (Hyundai, Daewoo) and electronics (Samsung). More recently a second tier of less developed countries have experienced accelerating export growth. These are sometimes referred to as Newly Exporting Countries (NECs: Colombia, Uruguay, Malaysia, Philippines, Thailand). For example in Malaysia the pace of growth in the manufacturing sector has continued to accelerate, and posted the largest increase this year of 18.9% in May 1995. In Thailand both GDP growth and consumer price inflation have again increased slightly, prompting further central bank action to restrain the current economic boom. The current account deficit is also expected to deteriorate, as robust import growth is sustained by strong consumer demand (Asia Pacific Consensus Forecast, August 7, 1995).

The Far East region is expected to sustain growth in the next decade. For the whole Asian Pacific region it is expected that the real GDP percentage increase will remain a stable 3% a year till 1996, the consumer prices % increase will decline from 4 to 2.7% a year, and the current account balance will improve from US$ 114.3 billion to US$ 58.3 billion by 1996. This will have consequences for the currency exchange rates. By this time in 1997 substantial (+ 3%) gains against the US Dollar
are expected for the Malaysian ringgit, South Korean won, Singapore dollar, and Taiwan dollar. The weaker Pakistan rupee is expected to depreciate furthest. Other currencies expected to depreciate in 1997 are Phillipine peso, Sri Lankan rupee, Vietnamese dong, Indonesian rupee, Indian rupee, Japanese yen and the Chinese renminbi (Asia Pacific Consensus Forecast, August 7, 1995).

Some people expect that in the future the NECs will overtake the NICs with regard to export penetration and economic growth as the NICs are now beginning to overtake the Japanese (Ethier, 1988). In addition to the NECs we now also see large opportunities in China, Indonesia, the former Soviet Union and Vietnam. All these countries are centrally located to participate in the new and dynamic activities along the Asian Information Superhighway, extending through the far eastern sections of Russia, Japan, Korea, Taiwan, ASEAN, and Bangelore and branching into several region states of China and Oceania. Both Singapore and Malaysia’s ethnic affinities and ties to India, Indonesia, and China will provide a tremendous advantage in the networked society; they can become leading-edge multimedia locations (Ohmae, 1995). East Asia is not the only alternative leading companies have. Today, some companies, even Japanese ones, are looking for cheap manufacturing alternatives in Central and Eastern Europe. Countries like Hungary, the Czech and Slovak Republics, and Poland are rapidly changing their economic structures into market economies. Poland, for example, is seen as a good alternative for Malaysia.

2.2 **Industries in transition**

The competitive situation of Western industry has changed dramatically over the past ten years, as a result of improved transportation, the rapid progress in information technology and the increased globalization of markets. This competition is manifest in both conventional and new products, and their associated technologies.

The driving factor behind this development is the business life cycle (see 2.3.1), or the maturation of technologies. When we look at the automotive, computer or office equipment industry we see technologies mature. This means that companies have to cope with ever increasing materials and production costs, in order to make the next generation of technologically advanced products. It also means customers refusing to pay higher prices for the marginal technological improvements.
To survive companies have two possibilities: reduction of costs or innovation (see Box 2.4), but more and more leading companies need to do both at the same time.

**Box 2.4  Janssen Pharmaceutica**

*The pharmaceutical (R&D oriented) industry tries to capture market share by delivering innovative products. For example, patches with microchips for sophisticated medication. These innovative products will give the customer high comfort and the possibility to live 'normally', despite his/her illness. Says Mr Lemmens, Vice President Purchasing at Janssen Pharmaceutica, 'today we have to deal with a price ceiling imposed by the government. This is a threat to our competitiveness, because R&D and innovation require huge investments. With that ceiling we have to earn back those investments with lower prices. Now there is no other choice than to work also on cost reductions'. Cost reduction is key in the pharmaceutical industry today. This is also enforced by the trend that medication without a prescription is becoming more and more a consumer product. An extra pressure on the industry to lower the basic costs. Says Lemmens, 'we want to get rid of the waste, just like the automotive industry. We no longer have monopolies for a long time. We have to work on cost reductions and innovation at the same time to survive'. This holds true also for other Pharmaceutical companies like SmithKline, Glaxo, and Fisons, who recently reorganized their Purchasing organization and strategies.  
(Source: Author's interviews, 1995).*

2.2.1  *The business life cycle*

Every business system develops in four distinct stages: birth (introduction), expansion (growth), leadership (saturation), and self-renewal - or, if not self renewal, death (decline) (Moore, 1993; van Weele, 1994). There are apparent differences in competitive strategy, management style and purchasing importance depending on the stage in the industry life cycle (van Weele, 1993).
A business starts with the introduction of a product; companies obtain a market position through research and development, product development, the introduction of new models and varieties and improvement of existing products. Research and development and, of course, marketing aimed at tailoring products and services to the requirements of specific market segments and target groups, are key success variables here. Companies focus on defining what customers want, that is, the value of a proposed new product or service and the best form for delivering it.

In the growth stage the business expands to direct battles for market share. Companies try to stimulate demand for the product, and meet demand with adequate
supply. In general, two conditions are necessary in this expansion stage: (1) a business concept that a large number of customers will value; and (2) the potential to scale up the concept to reach this broad market. During this stage, established companies can exercise enormous power in marketing and sales, as well as in the management of large-scale production and distribution, literally crushing smaller companies. But managers must also prepare for future leadership and leverage in the next stage. To do so, companies need to maintain careful control of customer relationships and core centers of value and innovation. Moreover they must develop relationships with their suppliers that constrain these followers from becoming leaders in stage 3. The product becomes less important, the services packed into the product are getting more important.

Stage 3 is about the fight for leadership and control in the business, making sure the business has a robust community of suppliers, and maintaining bargaining power by controlling key elements of the value chain. It's in stage 3 that companies become preoccupied with (technology) standards, interfaces, 'the modular organization', and customer/supplier relations. In this stage, lead producers must extend control by continuing to shape future directions and the investments of key customers and suppliers. At this stage measures aimed at cost reduction, quality improvement and lead time reduction play a major role in maintaining or reinforcing the market position. Contracting out non-core activities to specialized suppliers can serve all these objectives. This explains the rising purchasing-to-sales ratio of many industrial enterprises including IBM, Rank Xerox, Electrolux, Philips Electronics, DAF Trucks, Alcatel, and Volvo (Interviews, 1995; van Weele, 1993). They have to focus their businesses in order to deliver the highest value possible to their customers.

Stage 4 of a business occurs when mature business communities are threatened by rising new businesses and innovations, or sudden new environmental conditions that include changes in customer buying patterns, or macroeconomic conditions. This environmental shift will force changes across all major functions. Stage 4 is about tracking new trends, building a management team that can, if necessary, start a new business, and balancing stability and change by incorporating new innovations. In this stage the management style becomes important; leadership, a strong performance orientation towards the customer and motivation are the key issues. To prepare the ground for organizational breakthroughs, managers need to consider how the work of their company might be radically different: What seed innovations might make current businesses obsolete? What would it take to catalyze a cluster of ideas into a new and vital business?
What type of supply community would be required to bring these new ideas to the widest possible market? How can we motivate all the people involved (employers, suppliers, customers) to change with us?

During maturation of the company along the business life cycle, the competitive edge changes from product features to management style (see figure 2.2). In the last stage competitive advantage is driven by the vision of the company's leaders, and not by the business itself. There is a great need to change the vision for innovation and renewal in that stage. How do we motivate the people (both inside and outside the organization) to improve themselves continuously, so that the organization as a whole can deliver high value added to the customers (see box 2.5). Companies that are not able to meet these requirements are eliminated.

Box 2.5  HONDA's Management style

Honda of America is, due to their commitment to the business they are in and their unique management style, a highly successful organization. Managers are very open in sharing their experiences with customers, suppliers and even competitors! The most unique feature, as we see it, is their management style, which is deeply rooted in the history of the company and its founder and which therefore is very difficult to copy by other companies. Most of the concepts which are being applied in the purchasing and supply area are not new. However, they are applied in a unique way.

Respect for the individual and the environment are central elements of Honda's style. During our discussion with Mr. Dave Nelson, Vice President of Purchasing, many examples were mentioned. Part of the culture is that feedback is only provided in a positive way (see case below); employees (or associates as Honda relates to its co-workers) are never criticized on bad performance. Critique is always provided in a positive way in the form of suggestions and alternatives. Teamwork obviously is more valued than individual excellence.

Honda takes great care in recruiting and hiring the best people. In the purchasing area future associates are solicited from the best universities. Campus recruiting is actively pursued at universities with advanced purchasing management programs (among which Michigan State, Bowling Green, Arizona State, Florida State).
Candidates are invited for a visit to the Honda site at Marysville. Next they are put into two panel-interviews with future colleagues and at the end of the day they will be made an offer or not. Working at Honda is very demanding. As a person you should fit into the company's culture. Associates should be willing to make long working days (starting from 7.00 to 19.30 is no exception; overtime is, except for managers, paid extra). They should accept Honda's business-like working environment (all offices are open space with little or no privacy). And they should be sincere team-players rather than soloists. Honda says it will hire people for lifetime employment. When a new associate enters the plant, he is requested to plant his own tree. Due to this practice, Honda of America is now surrounded with a forest of over 10,000 employee-owned trees!

Firing people seldom happens. If done, it is executed with great care: a team of 6 peers and one manager will be formed which will formulate a recommendation. If a majority of the committee disagrees with the decision to fire someone, the decision will not be made.

Case Creating a positive feedback culture...

In explaining how Honda works towards a positive working climate Dave Nelson refers to a school program for underprivileged children he once watched. The objective of this program was to identify children of low income groups, which were to be considered as lost for society in the future due to the social climate they found themselves in. These kids were offered an educational program, where positive feedback was a crucial element. Dave Nelson remembers one of the teachers talking about her classroom approach. 'This teacher asked the kids the question: 'Who was the first president of the United States?' One kid showed his hand and said: 'President Lincoln'. The reaction of the teacher was: 'Abraham Lincoln was indeed a very important president to the US. He did many good and important things and made a great contribution to the US community. However, he was not the first president, who could help me out with this question?'.

The idea behind this teaching approach was to contribute, through providing constant, positive feedback, to the individual self-esteem of the kids. Through this it was hoped that these kids would feel better, gain more self-confidence and become better able to take responsibility for their own future. The teaching approach worked: all kids made it through high-school, and thirteen even made it through college!
The essential part Dave Nelson explained to us through this example is that most companies are too much control oriented. Too much control undermines self-confidence. It leads to a climate in which co-workers unlearn. The ultimate objective of Honda is to benefit from the talents of each individual as much as possible. Effective teamwork requires a climate which is supportive and in which people can speak up freely, even to their highest executives.

Honda is one of the very few companies that has adopted Company Wide Total Quality into its veins. The application of modern quality and supply methods is no point of discussion; neither the way they are being applied (see for example § 4.3.3 describing the way Honda cooperates with suppliers). For this reason the company is able to focus all energy and talent on their core products and businesses. (Source: Authors Interviews, 1995)

2.2.2 Importance of service to modern economies

As the Fortune 500 enters its fifth decade, it has undergone the most dramatic change in history. For four decades the Fortune 500 ranked the largest industrial companies in the US. In 1995, for the first time, the Fortune 500 is a single list combining industrial and service businesses, ranked in size by revenues. This represents a new economy, undergoing a restructuring as rapid and deep as the Industrial Revolution of the last century. The large manufacturing corporation was a product of that earlier transformation. It is becoming more common for large companies to be in manufacturing and also to operate relatively sophisticated services businesses. For example: General Electric, with its big television and financial services arms, PepsiCo, with its restaurants, AT&T with its various manufacturing businesses, Ford with its financial services, and manufacturers like IBM and Digital Equipment bringing in more revenues from consulting and processing services than 'real' service companies like EDS and Andersen Consulting (Stewart, 1995).

The new economy has largely obliterated once valid distinctions between industrial and service businesses, and between services. Phone companies compete with broadcasters, software manufacturers offer personal-finance services, airlines sell mutual funds, automakers write insurances. This massive restructuring of business is caused by two powerful, mutually supporting forces: digitization and deregulation - which created a gigantic information industry out of computers, telecommunications, and entertainment (Stewart, 1995).
In his book 'Intelligent Enterprise', James Brian Quinn (1993) underlines the increasing importance of the services. He stresses that 'with rare exceptions, products cannot be the source of competitive edge. They are too easy to imitate, clone etc. Superior products can provide only a temporary competitive advantage. Service-based strategies are more permanent'. In fact, most products merely provide a more convenient or less costly form in which to purchase services. The service sector becomes more and more the dominant sector as growing affluence builds up demand for outputs from it (see figure 2.3). The next wave of economic growth without doubt will come from knowledge-based businesses (Quinn, 1993; Davis, 1994).

Figure 2.3  *Real Value-Added by Sector (adapted from Quinn 1993)*

![Chart showing Real Value-Added by Sector (1950-1990)](chart)


Look for example to the changes in product features of the wristwatch. More and more services are packed into the watch. A Swatch watch allows its owner not only to tell time but also to make a fashion statement, which explains why the average Swatch
customer in Italy owns six (Normann, 1993). Seiko recently introduced the MessageWatch. This is a precision watch, semaphone and news receiver in one. It allows you to receive all kinds of phone messages and information (Minimail) about the weather, traffic and news headlines (Seiko, 1995). Some people call them 'smart' products. These products are smart because they filter and interpret information to enable the user to act more effectively. Smart products, created by knowledge-based businesses, can be identified by a variety of characteristics: they are interactive, they become smarter the more you use them, and they can be customized. Smart products and services will turn companies into educators, and consumers into lifelong learners (Davis, 1994).

Look at manufacturing, undergoing a vast disintermediation as globalization, advances in logistics, computer-aided design, and warp-speed communication permit companies to outsource factory work -the very work that defined them in decades past. US automakers today make almost no parts themselves; Chrysler outsources two-thirds (Stewart, 1995). It's an exaggeration, but not an outrageous one to say that the Big Three are chiefly design studios and marketeers. The increasing value of information -source of at least three-fourths of value-added in manufacturing, has changed the nature of manufacturing. In other words, 75% of a 'manufacturing' firm's employees are in non-manufacturing services, like engineering, design, sales, purchasing, distribution, etc. That is, they are in the professional service development and delivery business (Quinn, 1993). Shoemaker Nike makes no shoes; its work is research and development, design, marketing, distribution, and supervising contract-manufacturing, all services (see box 2.6).

Box 2.6  **NIKE Town, shop of the future?**

A visit to NIKE Town in Los Angeles is a real experience. In the leaflet we can read: 'We shouldn't be wasting your time telling you about NIKE town, showing you little pictures. That's fine and all, but it doesn't even come close. You know? You gotta go. You gotta see for yourself. You gotta feel it, you really do'. OK fine, but what is NIKE Town exactly?

We read further;

- It is a store, we sell stuff there, the finest sports and fitness gear in the world.
- We share things at NIKE Town. There are exhibits of memorabilia from your favorite athletes, special events, athlete appearances and
There is humor and irreverence at Nike Town. Nike attitude is everywhere. The proof is in the little things inside. Every detail, whether it screams or whispers, says NIKE. Nothing but NIKE. Everything NIKE has to offer in one place: NIKE Town.

This is something different from the sportshop at the corner of the street in your city. At NIKE Town shopping becomes entertainment, ambiance becomes very important. Nike calls it 'the sports and fitness experience' (Source: Nike Town Leaflet, 1995).

The convergence of goods and services is forcing a reconceptualization of what we mean by the terms 'production' and 'product'. The digital revolution has created an information industry that is a manufacturing-service hybrid, a fluid mix in which the same activity can be one, or the other, or both.

Companies that want to stay competitive in the late 1990s and beyond are being forced to invest in information and communication technology, to make production nimble and versatile, and increase speed even as it improves (service) quality and innovativeness (Spiers, 1995). Technology allows companies to bundle services into every product and turn every sale into an interactive conversation with the customer. 'Information technology is our core, our marketing vehicle, our factory, our product', says Frank Raines, vice chairman of Fannie Mae, a company that buys mortgages from lenders to package into securities. Among other moves, the company is linking its computers with clients' to speed mortgage lending, underwriting, and purchasing. Fannie Mae has more than doubled investment in information technology in the past four years (Spiers, 1995). Companies can do more than use information systems to sense the needs of their customers. They can also use the technology to respond faster to customers by creating direct service experiences for them. For example Levi Strauss (box 2.7).
Box 2.7  Levi Strauss

The California-based apparel company Levi Strauss has begun marketing a made-to-order service for customizing women's jeans in selected US locations. Sales clerks measure customers and feed the data into a computer aided-design information system. They let a customer try on sample jeans in the store—to perfect the fit—and they feed the additional data into the system. The system forwards the information to a computerized fabric-cutting machine at the factory, and the jeans are made to order.

The custom-jeans cost only $10 more than Levi Strauss's mass produced products. In this real time system, the transaction (selling the jeans) is also a service experience for the customer. The shopper will still expect high quality jeans at a reasonable price, but she will also help Levi Strauss design her product, and she'll define specific elements of the product—measurements, color, and texture—that satisfy her.

In the future Levi Strauss could use this system to broaden its dialogue with the customer. Customers could order new jeans over the phone; Levi Strauss could make them using the customer's measurements, stored in a database, and ship them out quickly. The company could also send information on new products to repeat customers. And, as the company database grows, it will have useful information about sizes and styles of jeans that its customers are ordering.


The next big thing will be real-time, interactive marketing. In coming years a consumer will sit before a screen, tell a marketer what color, style, and size she wants, even help design what she will get, and possibly give continual feedback after the sale. Marketing will merge with manufacturing; products will become services (Sellers 1995).

2.3 Customer focus and commitment

Companies that have taken leadership positions in their industries in the last decade typically have done so by narrowing their business focus, not broaden it. Treacy and Wiersema (1993) found, based on a three year study of 40 companies, that companies have focused on delivering superior customer value in line with one of the three value disciplines: operational excellence, customer intimacy, or product leadership.
They have become champions in one of these disciplines while meeting industry standards in the other two. Operational excellence means providing customers with reliable products or services at competitive prices and delivered with minimal difficulty or inconvenience, for example Federal Express and Wal-Mart. Customer intimacy means segmenting and targeting markets precisely and then tailoring offerings to match exactly the demands of those niches, for example Ciba-Geigy, Staples office supply, and IBM in its heyday. Product leadership means offering customers leading-edge products and services that consistently enhance the customer's use or application of the product, thereby making rivals' goods obsolete, for example NIKE and Toyota.

By focusing on operational excellence, customer intimacy or product leadership companies gain such a lead that competitors find it hard to catch up. This is largely because the leaders have aligned their entire operating model—that is, the company's culture, business processes, management systems, and computer platforms—to serve one value discipline. Companies that have adopted a strategy of operational excellence have built their operations around information systems that emphasize integration and low-cost transaction processing. Customer intimacy demands flexible and responsive business processes, empowerment of people working close to customers and information systems that integrate, and analyze data from many sources. Companies that pursue product leadership, strive to produce a continuous stream of state-of-the-art products and services. They must be creative, commercialize their ideas quickly and relentlessly pursue new solutions to the problems that their own latest product or service has just solved.

Knowing what they want to provide to customers, leading companies have figured out what they must do to follow through. And with the hard work of transforming their organizations behind them, they can concentrate on smaller adjustments that produce incremental value. Less focused companies must do far more than simply reengineer existing processes to gain this advantage.

Companies that sustain value leadership within their industries will be run by executives who not only understand the importance of focusing the business on its value discipline but also push relentlessly to advance the organization's operating model (i.e. TQM). They will personally lead the company's drive to develop new capabilities and to change the imbedded work habits, processes, and attitudes that prevent them from achieving excellence in the discipline they have chosen. By leading the effort to
transform their organizations, these individuals will be preparing their companies to set new industrial standards, to redefine what is possible, and to forever change the terms of competition (Treacy, Wiersma, 1993).

2.4 Conclusions

The business environment will be highly uncertain in many industries in the next decade. The pace of change quickens, and changes are outside the light of current expectations. Factors that have always seemed peripheral turn out to be key drivers of change in a company's key markets, and invaders from previously unrelated sectors can change the rules of the game overnight. The one thing that we can be sure of is that there will be surprises. Size, common sense and past experience count for little in these unpredictable times. The drivers behind this uncertainty are globalization of markets and competition, integration into three regional tradegroups: Far East, Europe, and USA, accelerating developments in telecommunication and information technology, and changing consumer patterns.

The great pressures driving companies in the next decade are price, time, quality and innovation. In tomorrow's brutally competitive world marketplace, the marketplace demands high added value and performance at the same time. The information technology will spawn a more efficient operating environment that rewards the highest quality, lowest cost producers. The changing consumers ask more and more unique and customized products. In the near future it will therefore be necessary to focus your resources on a clearly defined group of customers, in order to be able to differentiate from your competitors.

Purchasing must bring increased skill and value to their companies. What drives profit is important, so Purchasing must know the business. Results count in everything. Purchasing must find a way to add value, or disappear. In highly competitive and mature business environments, measures aimed at cost reduction, quality improvement, lead time reduction and innovation play a major role in maintaining or reinforcing the market position. Contracting out non-core activities to specialized suppliers can serve all these objectives. This explains the rising of purchasing's share in the cost price of finished product over the past few years. This in turn results in an increased awareness within management of the strategic value of the purchasing function (van Weele, 1993).
CHAPTER 3

Changing business strategies and structures

3.1 Introduction

What will be the impact of changes in the business environment on strategy and structure of large companies? How does globalization, changing consumer patterns, information and communication technology influence the organizations of the future?

3.2 New insights on organizational behavior

Today's global economy is genuinely borderless. Information, capital, and innovation flow all over the world at top-speed, enabled by technology and fueled by consumers' desires for access to the best and least expensive products (Ohmae, 1995). This global competition has issued a wake-up call to companies everywhere to change their assumptions about the design of effective organizations and workplaces. Businesses that will flourish in the new century will delegate more responsibility to more responsible people. There will be greater than ever investments in education and training to ensure work force professionalism. There will be abundant information technology tools to empower frontline service workers to better care for customers, making decisions on the spot using their portable computers for data access, to check in with their team, or to get quick approvals of unusual actions. There will be more entrepreneurial initiative, and there will be greater communication among every place that the company operates, ensuring coordination and the power of joint action across countries as well as across departments at home (Moss-Kanter, 1995).

According to Moss-Kanter (1995) the workplace is shifting in six important ways. We will discuss each of these briefly below.

3.2.1 From vertical to horizontal: the new organization

In the more participatory and democratic organizations that are constructing the future, managers in most cases will know last - that is, they delegate responsibility to teams that might include people from many departments who have many bosses. The horizontal dimension -looking across territories to focus the effort of the organization on common goals to serve customers- is increasingly more important than the 'vertical' dimension, what bosses in a single department tell people to do.
At every level—and there are fewer of them, too—more work is being done in cross-functional or cross-departmental project teams or even joint customer-supplier development teams; people are encouraged to take initiative and collaborate with their peers to solve problems rather than looking upward at their managers for instructions. Narrow specialist jobs are being replaced by broader and more demanding jobs. People performing knowledge work need information, and they rely on technology to make sure they have it (Wijchers, 1995).

3.2.2 From one place to many places: the new work setting

In the future, work will not be tied to one fixed physical place. Virtual reality may take the form of the virtual office: extensive computer networks will enable people to communicate with people around the world as easily as they talk with someone in the next office. They can hold involved group discussions about company policy, new product design, hiring plans or last night’s ball game without ever meeting other group members (Sproull e.a, 1995). They can do their jobs at home and communicate with one another by electronically carried voice, sight and word. Communications technology creates linkages across a number of sites. High speed information transfer makes place irrelevant. This means that workers of the future will be members of global teams while staying at home. They can work around the clock, timing work to their own personal needs or to when their customers in other parts of the world are at work.

3.2.3 From fat to lean: the new staffing principle

Bigger isn’t better any longer; smaller is more efficient, more flexible, and more innovative (Peters, 1994). The desire for 'fat' organizations that relied on redundancy, encouraged over-staffing, and could afford to waste people on non-essential tasks has been replaced by a preference for 'lean' organizations with focused efforts. Companies rely on external contractors for internal services. They expect existing staff to do more work before they add more people to help them. This provides great scope for initiative, but it will also create a bigger demand for information tools to help smaller staffs manage bigger projects.

3.2.4 From status and command rights to expertise and relationships: the new power source

In flatter organizations that delegate responsibility to an empowered work force, formal authority derived from hierarchy is less important than professional expertise. Leadership of ad hoc teams carrying out specific projects is more important than fixed
formal titles. A senior executive in a fast-growing company has five different business cards with five different titles, reflecting a portfolio of projects rather than a single fixed responsibility; and he's not the leader on every project team. The best source of power is having something to contribute to relationships with customers, suppliers, or even collaborators in the next department. And in the future, people will make sure they have skills and ideas to offer by tapping into interactive multimedia educational programs -and even consulting with experts through the internet.

3.2.5 *From position to performance: the new reward principle*

Compensation was traditionally based on principles such as the place of the job in a hierarchical grading system or seniority. In the new organization, fixed pay determined by abstract organizational principles is augmented by a variety of contingent forms of compensation -bonuses, commissions, or profit-sharing, for example- that are connected to actual contributions to meeting defined organizational goals. A wide variety of rewards and means for distributing them will be tailored flexibly to particular kinds of work. In the wired workplace of the future, people will be able to keep track of their own performance on their computers, see how they compare to others, and calculate the potential rewards accruing to them on their home computers, much the way they balance their checkbooks.

3.2.6 *From employment to 'employability': the new security*

Large organizations can no longer guarantee life-time employment, and few people would believe such a promise anyway. If security no longer comes from being employed, it must come from being employable. But employability security -the knowledge that today's work will enhance the person's desirability for future opportunities- is a promise that can be made and kept. Employability security comes from the chance to accumulate human capital -skills and reputation- that can be invested in new opportunities as they arise. In the future, people will need portable career assets - skills and reputation that can be applied anywhere. After the year 2000 you sell yourself based on your expertise and skills. If you can't sell yourself as a valuable individual, you fall out of the labor market in the future. People become, inside as well as outside organizations, more and more self-managed entrepreneurial units (van Empel, 1995).

The network providing career opportunity in the future will extend outside the company to its customers, suppliers, and venture partners. An extensive network not only improves the company's products, but also improves its people prospects.
Dense ties among companies help guarantee that people's skills are portable, easily taken from one company to another. They ensure that people are attuned to industry changes rather than focused narrowly on internal matters, and give them a large set of personal ties with other companies to serve as a job-finding network - extending career routes throughout an entire industry, rather than confining them to a single company.

The walls are coming down, in short, and the bridges are going up. In world-class companies, the workplace of the future is already under construction (see box 3.1). And the bridges are communications and information technologies.

**Box 3.1 Slashing organizational boundaries at IBM**

*IBM develops itself from a structured management organization into a flexible boundaryless worldwide organization in which teams can 'pop up' and dissolve, depending on the project. For example, the European purchasing specialists, though they report to the Director of Procurement Europe through the line organization, are physically part of the marketing bid teams, working on customer accounts and contributing to the development of solutions for them. So they have a double role of forming close ties with their customers and with their suppliers.*

*In fact, the old hierarchical structures are disintegrating as the effectiveness of cross-functional teams grows. The buyer is an integral part of such a customer facing organization and knows when to call in the industry-specific purchasing consultants to make recommendations on how to proceed in complex situations.*

*In some scenario's, as many as 60 suppliers could be involved, including consultants, hardware specialists, software companies, financiers, facilities management companies, and many others. It is inconceivable that a sales representative could commit to such a solution and such performance criteria without the contribution of procurement. Indeed, procurement would be the biggest contributor to such a bid, and would have to include such considerations as risk, deliverability and transferability to other customer environments.*

*The only way, therefore, to manage our new business environment is to organize in teams comprising a multitude of disciplines and skills, each team tailored to its specific range of customer requirements.*
When a particular bid situation is completed, the team can disband. The dynamics are complex and the mix of skills required extensive, but the objective remains the same: bring the multiple forces and competence within IBM together to solve a customer need.
(Source: Author’s interviews, 1995).

3.3 Value Chain Management and Value Chain Mapping

The term value chain is used to describe the various steps a good or service goes through from raw material to final consumption (see figure 3.1). Michael Porter (1985) considers every firm basically as a collection of primary and supporting value activities that are performed to design, produce, market, deliver and support products that are valuable for customers. As he argues, a firm’s value chain and the way in which it performs individual value-activities are a reflection of its history, its strategy, its approach to implementing its strategy, and the underlying economics of the activities themselves (Porter, 1985). This explains why there can be explicit differences between organizations with regard to structure, operational management, way of planning, style of management, and sometimes notable differences in strength of competition between organizations operating within the same sector.

Figure 3.1 Purchasing and the value chain
(redrawn from Porter 1985)
Seen from this perspective competitive advantage depends primarily on the art of positioning a company in the right place on the value chain; the right business, the right products and market segments, the right value activities in house. This can lead to very large companies that are almost completely vertically integrated, and to companies that focus on a few strategic value activities and leave the rest up to specialized suppliers. The latter we will see more and more in the future.

The vertically integrated organizations of yesterday were not designed to handle today’s uncertain business environment. Today the scale, specialized capabilities, and efficiency of outside service entities have so changed industry boundaries and supplier capabilities, that they have substantially diminished the desirability of much vertical integration. In particular, new technologies allow outside vendors to supply traditional staff or overhead services with such enhanced value and lowered costs that these activities can often be extensively outsourced (Quinn, 1993).

Each company should focus on a few core activities, where it can achieve and maintain a long-term competitive advantage, outsourcing all other activities in which they don’t have world-class status. Contracting out non-core activities to specialized suppliers can serve cost reduction, quality improvement, lead time reduction and innovation. This explains the rising of purchasing’s share in the cost price of finished product over the past few years. For Philips Electronics Ltd. this ratio increased from 49% to 62% from 1987 to 1994. Over the same period DAF Trucks experienced an increase from 53% to 69% (van Weele, 1993). It appears that the way forward requires fundamentally different approaches to inter-firm relationships. Companies become smaller, downsized through outsourcing non-core activities, but reinforced by strong collaboration with other firms that were once called ‘supplier’, now ‘network-partner’.

Increasingly, successful companies do not just add value, they reinvent it (Hamel, 1994). Their focus of strategic analysis is not the company or even the industry but the value-creating system itself, within which different economic actors (suppliers, business partners, customers) work together to co-produce value. Their key strategic task is the reconfiguration of roles and relationships among this constellation of actors, in order to mobilize the creation of value in new forms and by new players (see box 3.2). And their underlying strategic goal is to create an ever-improving fit between competencies and customers. To put it differently, successful companies conceive of strategy...
as systematic social innovation: the continuous design and redesign of complex business systems. In other words, vertical integration is replaced by 'virtual' integration.

**Box 3.2  American Express Company reinvents value**

American Express Company (AmEx), was the first financial services company to earn more than $1 billion in a year. With more than $200 billion under management, AmEx is probably the U.S's largest money manager. AmEx offers an excellent example of the attempt to take over some value activities from their customers, to increase competitive power, with the help of internal service technologies.

Via the recently introduced Purchasing Card, AmEx is now developing a unique internal and customer database, which enables AmEx to provide their customers (mainly large companies like IBM, Gillette, Xerox) with all kinds of information services. By capturing the details of transactions that its various customers put through their credit card, AmEx seeks to add value in new ways. From the captured data they can identify employers' buying behavior, exceptional spendings, data for negotiating with travel agents or hotels for better rates, and more sophisticated and specialized services, like demographic or comparative analysis of customer bases.

If fully implemented, the new technology can allow users to capture and temporarily store data on smart cards for their own expenditure reports or records to facilitate later reports and analyses. The card itself could be used directly, through telephone or computer interfaces, to make reservations, obtain money, or buy goods and services.

Because of the personal services it provides, AmEx can charge a premium over other providers of credit cards. By capturing even more details from its databases, AmEx hopes to introduce its future new products much more rapidly and over a broader geographical base, both keys to its future competitiveness. All this, in turn, should increase AmEx's differentiation as a high-status, higher-priced alternative in the charge card industry. By taking over some value activities from their customers, such as analyzing data, they are combining financial services with information services.

(Source: Interviews, 1995; Quinn, 1993)
In this respect value management is the way a company defines its business and links together the only two resources that really matter in today's economy: knowledge and relationships or organization's competencies and customers.

A still rarely used technique for defining the relationships in the chain is value chain mapping. Some companies, for example Chrysler, map out the origin of their supplies; where they actually come from, who is involved in the supply chain, etc. Sometimes even up to eight levels back! The reason for this is that further down the chain most of the sub-suppliers literally have no idea where their products end up. Each level in the chain only communicates with purchase orders, releases, and pay checks. They never really talk to each other, only in financial terms. Chrysler is dedicated to changing that. Communication along the chain is a primary issue of their Extended Enterprise Program, a program aimed at managing the entire value chain. With value mapping you can identify the best suppliers, and make them part of your team. It is also a technique to increase motivation at the lower levels of the chain to improve performance. It is not about rationalizing the system, or controlling the chain; all Chrysler wants is that people (suppliers) talk to each other and make them active members of the Chrysler family. According to Chrysler, this better understanding leads to better quality and lower costs for all (see box 3.3).

Box 3.3  
**Value chain mapping**

*Says Thomas Stallkamp, VP Purchasing of Chrysler: 'Recently we mapped the chain down till the raw materials for a 2 dollar engine part. It was made out of 11 components from 33 individual suppliers, in different countries. With one wrong component the part can break down, and if the part doesn't work, the engine doesn't work. Eventually the Chrysler car will not run, making our customer angry about Chrysler. Making one simple 2 dollar part seemed to be very complex. Now we ask our suppliers to map their value chains, understand how complex it is, and try to find solutions for inefficiencies. We try to make it clear to all our suppliers that they play a role that is much larger than they first realized'.*  
*(Source: NAPM, 1995)*

3.4  **Competency-based strategies and Process orientation**

The two forces behind the reorganizing of the value chain are the increased importance of concentrating on core competencies, and the orientation on processes.
3.4.1 Competency-based strategies

In their HBR-article 'The core competence of the corporation' Prahalad and Hamel stress 'we believe an obsession with competence building will characterize the global winners of the future. Companies will be judged on their ability to identify, cultivate, and exploit the core competencies that make growth possible - indeed they have to rethink the concept of the corporation itself'.

In the business environment of the late 1990s, the critical task for management is to create an organization capable of infusing products with irresistible functionality or, better yet, creating products that customers need but have not yet even imagined. Core competencies are the wellspring of these new products. Top management must add value by consolidating corporate-wide technologies and production skills into competencies that empower individual businesses to adapt quickly to changing opportunities. The corporation, like a tree, grows from its roots. Core products are nourished by competencies and engender business units, whose fruit are end products.

Quinn (1993) has defined four maxims for long-term dominance through core competencies:

1) For maximum long-term strategic advantage, companies focus their own internal resources on relatively few core sources of intellectual or service strength, which create and maintain a real meaningful long-term distinctiveness in customers' minds.

2) The key to competitive analysis and competitive advantage is to approach the company's remaining capabilities as a group of service activities that could be either 'made' internally or 'bought' externally from a wide variety of suppliers specializing or functionally competing in that activity.

3) For continued success companies actively command, dominate, and build barriers to entry around those selected activities critical to their particular strategic concept. Concentrating more power than anyone else in the world on these core competencies as they affect customers is crucial to strategic success.

4) Management plan and control their outsourcing so that their company never becomes overly dependent on, or later dominated by, their partners. This means consciously developing and monitoring multiple competitive sources and strategically controlling certain critical steps in the process.
Using this approach to core competencies, companies can develop a much higher level of focus, and hence leverage, for their strategies than through traditional product-focused strategies.

3.4.2 Process orientation

Inflexibility, unresponsiveness, the absence of customer focus, an obsession with activity rather than result, bureaucratic paralysis, lack of innovation, high overhead - these are the legacies of one hundred years of task-oriented organizations. It is no longer necessary or desirable for companies to organize their work around the principles of Adam Smith's division of labor. Task-oriented jobs (or process fragmentation) in today's world of customers, competition and change are obsolete. Instead, companies must organize work around processes, which are relevant for their customers. By process we mean a set of activities that, taken together, produce a value to a customer (internal or external). By process orientation we mean looking at an entire process that cuts across organizational boundaries (Hammer, 1993) (see box 3.4).

Box 3.4 Stork Wärtsilä Diesel

Stork Wärtsilä Diesel (SWD) is the Dutch joint venture company between one of the world's largest manufacturer's of 'medium speed' diesel engines, the Finnish company Wärtsilä Diesel Oy and the Dutch company Stork N.V. International. SWD has formulated a new strategy which emphasizes a strong focus on a few clearly defined core activities, and more buying of complete functions from main suppliers. A diesel engine is made up of about 1000 components, of which today SWD is making 200 themselves. In the near future SWD will only make 3 strategic components, and buy the rest from main suppliers. SWD wants to build to order, with a maximum order-to-delivery cycle of 16 weeks, and no inventory other than work in process. This strategy demands a different view on the organizational processes.

Coming from a situation in which SWD was functionally organized, nowadays SWD is an example of a company organized around the three core processes, most relevant for the customer: innovation, order fulfillment, and after-sales service process.
At SWD management say: 'we need to have people responsible for constant product and process innovation, we need people for the order process or the assembly of our products, and we need to back up our product with very consistent services'. Every process delivers a direct value for the customer: the innovation process designs the product to customer requirements, order fulfillment makes the actual product for the customer, and after-sales service supports the product after delivering it to the customer. In order to remain competitive and leading, SWD must focus all their resources on these core processes. (Source: Interviews, 1995)

In most companies, no one is in charge of one of these cross-departmental processes. Everyone is involved, but no one is in charge. People involved in a process look inward toward their department and upward toward their boss, but no one looks outward toward the customer (Hammer, 1993). In order to meet the contemporary demands of quality, service, flexibility and low cost, processes must be kept simple, transparent, and focused on the customer. Work should be performed where it makes most sense. Work is shifted across organizational boundaries to improve overall process performance. For example, the customer of a certain process can perform some or all the process, in order to eliminate handoff and overhead and cut costs for all.
Box 3.5 Rafting organization

The 21st century is for companies that can deliver quickly and flexibly all kinds of products and services to the market at a low price. This century will require from organizations the capacity to keep up with an intense pace of change as well as the capacity to reshape themselves continually. No longer can we build our organizational houses on the obsolete assumption that they will last for a 100 years. Rigid, old corporate styles, like the inflexible steel and stone headquarters that symbolized them, are fast becoming quaint vestiges of things past.

Surviving in the 'wild waters' of the future demands a thorough adjustment of organization and crew. In such an environment mammoth tankers are unmanageable. Instead, the image of 'rafting' emerges, in which the objective is to successfully negotiate a fast-flowing river with a small group of people in an inflatable raft. It is fairly obvious that such an environment does not require an hierarchical, strict division of functions and lots of baggage, but rather improvisation, teamwork and simple equipment. In terms of organizations, this 'rafting model' implies:

• flat organizational structure with minimal overhead
• organization structure built around 3 to 5 core processes
• extensive outsourcing of non-core activities
• process orientation
• multifunctional, multidisciplinary professionals, working in teams
• simple lines of command, clear tasks, and simple accountability relations
• small, manoeuvrable organizational units, well equipped for their task.

The rafting organization is a concept in which multi-disciplinary, project-oriented teams are the building blocks. Manufacturers, suppliers, distributors, and end-users tie together to realize a product or service. The Rafting organization will evaporate in a virtual network, that behaves like an intangible entity, continuously reshaping. The Rafting organization derives its power from concentration on core competencies. Focusing on core competencies means specialization on strengths. For all non-core activities partners will be sought to form a tight relationship.
The building blocks of the rafting organization, the organizational units, have a fluid structure and a small size. Roles and duties can change swiftly and subtly as the requirements of the task change. As priorities are identified, dealt with, and reordered, leadership may also shift from one member to another as the situation dictates. In sum, a rafting organization will organize as it sees fit.

The units are almost always small enough to permit close interpersonal relationships among their members. Size varies with the organizational context, as well as the complexity and time frame of the task. The rafting organization can be classified as a network of small teams, usually held together by a small central core. The units are also temporary and relatively short-lived. Unlike many units in traditional organizations, rafting-units do not try to guarantee their longevity. They are dedicated to excellence, speed, and flexibility; and when their project ends, they end.

The internal conditions are characterized by:

• Openness and Flexibility; easy informal access across hierarchical levels and across departmental, divisional, and organizational boundaries.
• Interdependence and autonomy; management must give the units autonomy but at the same time provide steering.
• People first; organizations that first devote a lot of effort to selecting their people and then allow them plenty of autonomy and opportunities to interact, are likely to generate rafting-units that will build challenging tasks for themselves. Rafting organizations usually search for the best candidates in each broad field instead of seeking people to fill narrowly defined niches.

Consider for example film production companies. For any film project, producers must assemble a collection of writers, directors, actors, camera people, financial backers, and more. They are simply a collection of specialists doing their own things. But, if the producer selects the very best people and leads the project with faith and passion, and if the project itself takes on great significance for the team, then there is a chance that such a diverse assemblage can become a successful team.

(Source: van Weele, 1994)
Outsourcing and managing Best-in-Class supplier networks

Outsourcing will probably take extreme forms in the future. Companies will remove as many links from the value chain as possible. According to John Gillett of IBM Procurement, IBM is likely to become a 'Hollow company', outsourcing many services and non-core jobs. Outside the key areas, there exists a huge range of activities that are common to most businesses and which have traditionally been carried out in-house, but can safely be outsourced. These activities are important to the smooth running of the business, but not a unique ingredient of the overall product.

The point is that outsourcing becomes more and more a strategic issue, with great importance for the survival of the company. Because if a company is not the best in the world (including all transaction costs) at a certain activity, it is giving up competitive edge by performing the activity internally. New technologies and management information systems have dramatically shifted the balance between what it pays to outsource and what it can effectively produce internally. As a result companies, especially the ones in very volatile, highly customized, or advanced technology fields, find extensive outsourcing more attractive than before (Quinn, 1993).

Often outsiders can perform the outsourced activities at lower cost and with higher value-added than the buying company. In some cases economies of scale have moved toward the supplier level. In others, the complexities of services and their technologies have grown so great that one must concentrate on them in order to be most proficient.

Quinn (1993) argues that all non-production elements in a company's value chain and at corporate staff levels need to be redefined as 'services', which can either be produced internally or potentially be outsourced to external firms. In analyzing the value adding activities in detail, one should ask, 'in which of these activities do we have, or can we achieve, 'best in world' capabilities internally?' For each other activity, one should consider whether the company can efficiently bring that activity up to world-class, or whether it should outsource the activity or form an alliance with someone who can provide 'best in world' capabilities. The corporation itself should concentrate its own resources and energies internally on those activities where it can be best in world,
where it can create unique value, and where it must have strategic control to maintain
dominance within its own selected areas of special competency, over its crucial custo-
mer and supplier relationships, and over the systems that coordinate the two.

To be able to outsource almost everything, you need excellent suppliers, referred
to by some companies as world-class suppliers, or best-in-class suppliers. More and
more suppliers are professional enough to deliver complete functions with the required
quality, flexibility and innovativeness. Some say there are still not enough of these main
suppliers (Interviews, 1995). The key to strategic success for many firms have been
their coalitions with the world's best suppliers, product designers, advertising agencies,
distribution channels, financial houses, or other outside sources. For example, Nike
concentrates on design, marketing, and distribution, while outsourcing virtually all pro-
duction of its sporting goods lines (Quinn, 1993).

The trend in many industries is away from vertical integration towards 'virtual
integration' (Hamel, 1994). In a coalition or network, each firm specializes in a few
core competencies. The influence, power and profits of any firm within a 'virtual' net-
work depend on the uniqueness and relative importance of that firm's core competencies.

Box 3.6 From delivering hardware to total solutions

The dynamics of Information Technology have outdated the time-worn process of
just delivering hardware products and ushered in the era of 'total solutions' which
frequently include software, services, operations, networking, cabling and even
building construction, manpower, financing and insurance. IBM wants to become
a worldwide 'Wall-to-wall Solution Provider'; the broader the spectrum of the
problem, the better IBM is for doing the job. 'What we do is project management,
but different is that we guarantee the results, we will do the risk management for
our clients', says John Gillett of IBM. IBM's customers frequently are global com-
panies, looking for solutions to be implemented wherever they operate, and there-
fore seeking a single interface with a global supplier.

No single company, not even one as large and ubiquitous as IBM, can 'make' all
those components of a solution. Many, most even, have to be brought in from
other companies; the prime contractor, the 'value chain integrator', has the
responsibility (and the headaches!) of tying it all together. This means that IBM
now has a greater volume of purchasing destined directly for the customer as a part of the overall solution than for internal uses (raw materials, components, supplies).
(Source: Interviews, 1995)

In a coalition companies can combine the supplier's core business (the supplier's 'raison d'etre') with their own core competencies. The benefits are obvious: much higher level of knowledge, leverage, motivation, and improvements. All very measurable benefits. Most significant intangible benefit: the highly focused professional attention to company requirements that is applied by the new service provider - often hard to achieve between different departments of the same company.

As a company focuses ever more on its own internal knowledge and service skills and those of its suppliers, it increasingly finds that managing shifts away from the overseeing and deployment of fiscal and physical assets toward the management of human skills, knowledge bases, and intellect, both within the company and in its suppliers. In fact, its raison d'etre becomes the systematic coordination of knowledge and intellect throughout its (often highly desegregated) network to meet customer needs.

3.6 Conclusions

Organizations are constantly looking for ways of becoming more competitive in today's global market place. It is becoming increasingly evident that firms can no longer pass on increased costs to the consumer in the form of price rises, due to highly globalized and competitive markets. Firms must, therefore, become more competitive. This increased competitiveness can be achieved through the adoption of strategic positioning approaches, in other words determine what the core and what non-core activities are. Companies will focus on their core activities in order to reach a higher level of proficiency in these activities. The non-core activities will be outsourced to highly specialized world-class supplies. This extensive outsourcing increases the dependency of suppliers, making supply management, or management of Best-In-Class supplier networks, a key success factor. Companies that are not capable of doing this, will fail in the highly competitive environment of the future.
Towards Virtual Purchasing: Cross Functionalization and Network Structures
CHAPTER 4

Global supply management and global purchasing commodity strategies for production and non-production

4.1 Introduction

What are the implications for the Purchasing profession? How do leading-edge companies cope with the increasing need to professionalize, rationalize, and globalize their purchasing operations? What role will Purchasing and Supply Management play in the future global, network organization? How do they buy goods and services, and how do they manage their supply base?

Answering these questions has led in many leading-edge companies to significant changes in structure and working procedures. This chapter discusses the major changes which companies are experiencing nowadays in restructuring their Purchasing and Supply organization. In particular, the question of how to redefine primary purchasing tasks, responsibilities and competencies in the relationship with other departments will be addressed. We will also talk about the issue of centralization-decentralization in Purchasing and about Supply management. We will differentiate between product related and non-product related buying, global commodity strategies, and the management of supplier relationships.

4.2 Building synergy in a decentralized company

The role and structure of Purchasing is very much dependent on business characteristics and situational factors. Some very large companies, such as Chrysler, have created a highly centralized corporate Procurement structure, other companies have a more decentralized business unit structure.

The position of Purchasing within the organization's hierarchy is very much dependent on the view that management holds of the Purchasing function. When management considers Purchasing mainly as an operational activity with little value added, the department will be placed relatively low in the organizational hierarchy. If management considers Purchasing to be an important competitive factor, however, and of strategic importance to the organization, then the Purchasing manager might report directly to the board of directors. Management's view of Purchasing seems, to a large extent, related to the following factors (van Weele, 1994; Interviews, 1995):
- **Purchasing's share in the end product's cost price:** The higher the purchasing content, the more strategic the Purchasing function is considered to be. In the future as a result of the increasing trend of outsourcing (finished products, services, MRO), purchasing's share to the company's overall turnover will grow and, hence, purchasing decisions will have a greater impact on the company's ROA.

- **The financial position of the company:** In times of severe financial losses, management will rediscover the value of money, and will become more demanding of its purchasing operations and purchasing-related costs, resulting in a greater accountability and performance orientation being demanded.

- **The extent to which the company depends on the supplier market:** Supply markets with high concentration ratios usually get more attention from management, as suppliers in these markets usually have strong dominance over their customers.

- **Maturity of technologies (consumer electronics, automobiles):** These technologies are not subject to significant changes. This means that companies have to compete on price, quality and service to maintain or expand their market share. Purchasing should contribute to these goals.

- **Competitive environment:** In highly competitive industries cost reduction is key, Purchasing should contribute to the bottom line. This is not only true for the buying of production goods but also for the non-production area, where 10-30% savings can be obtained.

Over the last few years many international companies have slashed their centralized corporate staffs, whilst adopting a business Unit structure. In doing so it seems that companies traded one set of problems (bureaucracy, stifled initiative, under-performing 'tangential' businesses, and lack of customer focus) for another set of problems (no cross communication, suboptimization, territorialism, no uniform attitude towards suppliers, lack of synergy). Today many companies have abandoned the pure business unit structure, and have moved back to a center-led organizational structure (Interviews, 1995). The goal is not to find the narrow line between unattractive extremes, not to occupy the middle ground, but to find the higher ground: the synthesis of the corporate and the business unit structure. Companies follow neither absolute decentralization, nor heavy-handed corporate strategy, but what might be described as
enlightened collective strategy, or center-led strategies. These are characterized by a clear
direction, i.e. vision, from the top in combination with bottom-up entrepreneurship
(Keough, 1995). Examples of these companies are: General Motors, IBM, and
SmithKline Beecham (see box 4.1).

However, more and more companies have come to realize the potential value in
being a boundaryless organization, and there are some cross-unit opportunities that are
just too attractive to sacrifice on the altar of absolute vertical unit autonomy (Hamel,
1994). To start you need a visionary Vice President in place who feels responsible for
the process and who is able to take the lead in it. The center-led organization is clearly
directed, and benefits driven. Of course, the development of collective strategy requires
managers to adopt a more cooperative and less competitive posture vis-a-vis their peers.
They must recognize that for every instance of resource sharing, cross-unit support, or
sacrifice to the greater good, there may not be an immediate benefit.

Box 4.1  IBM: From fragmentation to Procurement synergy?

'A few years ago IBM was absolutely unable to leverage their purchasing poten­
tial, because of the fragmentation that we suffered', says Javier Urioste, Director
Supplier Relations Worldwide Procurement. During the 1980s and early 1990s
IBM followed a decentralization strategy that promoted the singular identity and
independence of its many business divisions and regional organizations. The
uncoordinated strategies that were fostered by the approach caused worldwide
proliferation of product models, rampant growth of exclusive design, unique and
often redundant components, incompatible information systems and databases.
They also led to inconsistent and often contradictory procurement practices that
were driven by parochial objectives and that caused fragmented, conflicting sup­
ply base relationships. Each plant had its own procurement organization, and
their own practices. Says Urioste: 'The suppliers didn't know how to deal with
IBM, they were at a loss on how to support IBM'.

IBM's financial performance in the recent past reflects the inadequacy of those
strategies and practices. To help regain global competiveness, IBM's procurement
process needed to be radically overhauled; incremental enhancements of existing
practices and 'global' sourcing arrangements would not have been sufficient to
achieve the required quantum improvement in performance. Rapid migration to
a new global, enterprise-wide procurement model thus became a first priority in 1994. The overall objective was to enable Procurement to affect the corporation's business performance in a manner commensurate with the expected potential. This meant that the new Procurement model had to address enterprise-wide processes and global supply-base practices. Three major initiatives were defined:

- **Change internal practices**: central, corporate-wide vision and strategy.
- **Change IBM-supplier practices**: global processes for selection, qualification, establishment, and maintenance of supply-base relationships.
- **Change the supply base**: segment and segregate suppliers based on global capabilities.

Those initiatives provided in fact a 'Virtual centralization' of Procurement processes, while allowing the divisions to exercise agility and speed in decision and execution consistent with their own business goals and challenges. The model also defines and establishes linkages between the new worldwide procurement process and the new enterprise wide Product development, Supply-demand logistics and Manufacturing/fulfillment processes. Furthermore, the model establishes the interlock between the worldwide procurement process with both division and local production site procurement processes. In General Purchases IBM's view is that there is no reason why they should decentralize at all. IBM recognizes, however, that probably no more than 25% of the contracts will be global with the balance done at the regional (i.e. North America, Europe etc) and local level. Worldwide commodity councils ensure consistency and volume consolidation, for some 20 non-production product and services groupings. IBM tells their people what car to drive and what pen to write with. Before this there was a considerable lack of control in this area.

**In Production Buying** IBM has established Global cross-divisional commodity councils. These councils reflect both the company wide and the division business strategies. The purchasing execution remains decentralized within each division or manufacturing site.

(Source: Authors' interviews, 1995)
4.3 Production-related Purchasing & Supply strategies

The center-led strategies are primarily found in the production buying area. We see process globalization and worldwide organizational integration in the production buying area. Leading-edge companies will have a global competitive sourcing process which searches more and more for main suppliers with only world-class capabilities, and global presence. Some of the advantages of this global sourcing are price advantage, improved quality, supplier commitment, a reduced supplier base, joint risk sharing, less complex communication network, reduction in total inventory, improved lead time, easier scheduling and less selling costs for the supplier. It also saves time and resources, hence more attention can be given to the relationship with the main suppliers, to managing the supply base, and improving the performance. Using all the resources in the supply base, and improving them continuously is key in today's competitive environment.

Whenever we speak of 'corporate' in this paragraph, we take the perspective of the one-product company, or, in the case of a multi-product company, the division with homogeneous products.

4.3.1 Center-led commodity management

Some of the characteristics of center-led commodity management which leading-edge companies pursue to improve the global sourcing process are: corporate commodity plans, cross-functional teams and supply standardization. Other general characteristics are more involvement of the line management in determining the commodity plans, and active supplier management.

Center-led commodity management requires developing a corporate commodity plan. Such a plan structures all aspects of Purchasing for the entire organization and evaluates the risk and value associated with each commodity. The plan determines the worldwide volume requirements of a certain commodity over the different business units. It also contains price benchmarking, a sourcing strategy based on the strategic business units plans, a selection of who should be the supplier, and a thorough risk assessment to make sure there are no unpleasant surprises when the company decides on a part or supplier.
A vehicle for developing such commodity plans is the purchasing product portfolio. In order to position the commodities, they are analyzed on the basis of two types of variables:
- the importance of purchasing to the company; impact on financial result
- the supply risk.

Combination of these variables yields a two-dimensional matrix with four quadrants; these represent the commodity groups, each offering different interests to the company (see figure 4.1).

Figure 4.1 *The purchasing product portfolio technique*  
*(drawn from Van Weele 1994)*

As a rule, strategic products together with the leverage products make up 80% of total turnover. Minor changes in price levels will have an immediate impact on the end product's cost price so that price and cost developments, as well as the developments in the supplier market, must be monitored closely. Every possibility to reduce cost needs to be investigated. In general building volume (or combining volume from different production units) will lead to better conditions. These arguments justify a center-led or coordinated commodity management in this area.
The most interesting quadrant is the Leverage quadrant. In general, these commodities can be obtained from various suppliers and represent a relatively large share of the end product's cost price. A small change in price has a relatively strong effect on the cost price of the end product. These are the commodities for which Ignacio Lopez, VP Purchasing and Manufacturing at Volkswagen, pursued an aggressive competitive bidding strategy. With this strategy he obtained significant savings from an international supplier base, however, this approach has met a lot of criticism and resistance.

The commodities in the 'Lopez square', where a company can leverage most, are the ones that companies want to make a central (corporate) contract for, reflecting local content obligations. This because a contract in the US would not be valid for Europe. So, a contract will have some general terms and conditions, with customized attachments for Latin America, Europe, and Asia.

Since the company experiences significant supply risk for strategic products, it will strive for a 'cooperative' type of relationship with suppliers of these products. Close and lasting cooperation with these suppliers must be achieved in order to obtain significant improvements in the areas of product quality, delivery reliability, product development and product design, and cost reduction. By intensifying the relationship with suppliers of these products, the manufacturing company tries to minimize its supply risk as much as possible, while actively pursuing overall materials cost reduction and sharing expertise at the same time. Corporate involvement is needed in this segment to create mutual commitment and trust at the board level, and to facilitate information sharing (or expertise leverage). These kinds of relationships demand a lot of effort to make them successful, so there is a limit to how many you can sustain.

Historically, corporate commodity plans were primarily developed by purchasing managers from different countries, often without active involvement of the line-management. Now, commodity plans are developed by a high-level Executive Steering Committee, in which line managers are actively involved. This is to prevent line managers running away from the global contract once it is established. Purchasing needs the support of the Executive Board to force reluctant managers to use the global contract. Purchasing should have someone on the Board who is the sponsor of this commodity thinking. The point why these corporate initiatives often fail, is because of a lack of steering from the top. Usually the board will say: 'OK this is a good idea,
let's do it', but later on they do not take responsibility for the results. So, Purchasing has to take care of full engagement and full involvement of the executive board, in order to make global commodity plans a success.

4.3.2. **Cross-functional teamwork and standardization**

Many leading-edge companies have developed cross-functional teamwork when developing and executing their purchasing policies. Such teams are built up from professionals in functions such as product design, research and development, marketing, product distribution, and finance, together with purchasing professionals. The corporate commodity plans mostly are executed by so-called commodity teams. These teams have to have some level of leadership. The leader will often be a person identified as a commodity manager, not necessarily a purchasing professional, who will report to the Vice President of Purchasing. The structure usually is virtual. That means that the people, or the expertise will not necessarily reside within corporate headquarters. The expertise may be present, decentrally in Europe or Asia. These teams have the power to contract agreements worldwide for their commodity; select the supplier, sign the contracts and establish the terms and conditions. After the contract is established it can reside in a central database, so that each of the divisions can draw from those contracts.

Some companies are even thinking of getting the supplier on the team. This has the advantage that it increases the visibility of the external customer to the suppliers. Purchasing wants to be transparent in the middle, and link all the parties involved (see Figure 4.2). To get cycle time reduced, companies want their supplier to know directly what the customer wants, from a design or development point of view. That is why it is good to have them on the team. Suppliers will tell you what they can do for you technically now, and in the future. In this way companies can benefit from the supplier's creativity and innovativeness.
Another issue is the implementation of supply standardization. Many companies are starting to realize that there are a lot of commonalities between their businesses, that they need to share that information, and that they need to act on it. They can’t afford not to in this competitive environment. In order to generate leverage in the company’s total requirements companies look for opportunities to reduce cost, opportunities to share suppliers, and possibilities to pursue product and supplier standardization. For example, Chrysler restricts the number of fasteners (screws, bolts, parks, etc.) that the engineers on the Product Development Platforms can use. Chrysler used to have a situation where the engineers could look at any fastener they want. Now they are restricted to a small list, which is very restrictive and brings an approved source with it. This list is also integrated in the CAD/CAM systems. In this way Chrysler rationalized their fastener purchases from at a high point of 500 suppliers down to 42 suppliers for the whole company. Today, Chrysler also intends to take that recommended list to their first tier suppliers (Interviews, 1995).

Some of the benefits of standardization are (Guigley, 1995):
- lower material costs; as you buy more of one part, its cost go down
higher quality: working with fewer parts lets you concentrate on getting them right
lower overhead costs: fewer parts means fewer drawings, fewer purchase orders released and monitored, fewer bills to pay.

Standardization is about having engineers use the same parts in different products or models of products, and buying standard parts or using the same vendors. It is interesting, on a corporate level, to identify the key suppliers with the 20/80 rule. Look for the most important suppliers for commodities. Make an inventory over the different divisions of where you have common requirements, so that you can manage it. It looks simple, but when you have multiple plants and/or divisions across a country or continents, it gets very difficult. Implementing a common material strategy requires three rules to be followed (Quigley, 1995):

1.) Design common parts into your products. Engineers must think in of the shelf parts whenever possible. This is difficult because engineers like to design and be innovative, so using the same parts is not high on their list.
2.) Develop purchasing procedures and information systems that centralize vendor selection and contracts, and decentralize scheduling of materials.
3.) Demand that rules one and two are followed. Challenge senior management to change the engineering design philosophies, combining purchasing requirements, and stimulating the use of information systems.

Box 4.2  IBM commodity buying

IBM’s new Procurement Organization provides suppliers with consolidated, enterprise-wide requirements and a 'virtual' organization with a single contact point (the commodity council) for 'contracting'. However, in all cases the actual purchasing operations are decentralized. Production buying is organized around Divisional Global Procurement Executives. These managers report to the Chief Purchasing Officer (CPO), but also report to the President of their division. They have, in fact, two bosses: one functional and one line manager. The Divisional Procurement Executives meet with the CPO on the Worldwide Procurement Executive councils, so there is direct contact between the CPO and them. Here company wide strategies are decided upon. The CPO works with each of these managers individually to make sure that the corporate wide procurement strategy is consistent with what the division needs to have.
Figure 4.3 IBM's Commodity Team structure

Procurement Organizations Company-wide Must be Aligned to Ensure Interlock of the Procurement, Development / Design and Fulfillment / Manufacturing Process

Enterprise-wide Processes Are Interlocked at the Procurement Executive Level for Business Strategy and "Virtual Centralization" of Commodity Management
For Production buying, IBM has established global commodity councils. IBM has established them late 1994, and they are now in place and working very well. Each of the divisions has representatives (procurement and/or engineering people) on the councils, who make purchasing agreements for the entire company worldwide. The divisional global commodity manager may bring to the council some of the people from development, competitive analysis, or even from the manufacturing site, to explain to the council when special terms and conditions are needed. These councils have the power to contract agreements for IBM worldwide for their commodity; to select suppliers, sign the contract and establish the terms and conditions. Then each of the divisions will draw from those contracts. So if a certain plant wants to buy cables and connectors, it can do so from a selective group of qualified suppliers. Each of the IBM manufacturing plants has a local supply chain staff. These are the people who actually pull from the contract, control the inventory, control the logistics. They are very closely linked with the Divisional Global Procurement Executive. In this way it is assured that there is input from the sites in the councils, in order to hear whether the suppliers are performing up to expectations.

The divisional commodity manager brings to the council the view and interests of his Division. Together the councils will develop a corporate view. In this way IBM is able to benefit from its massive purchasing power, whilst at the same time pursuing maximum operational flexibility for its manufacturing plants.

(Source: Interviews, 1995)

4.3.3 Supplier management: HONDA OF AMERICA MANUFACTURING

Car companies have often led the way in developing innovative purchasing techniques. Given the value and complexity of a typical OEM's purchasing, which involves thousands of dollars and thousands of components for an average car, this is hardly surprising. Honda of America Manufacturing is no exception, spending 3.5 billion dollar on parts each year to produce more than 500,000 Civics and Accords. The effectiveness of Honda's purchasing is evident from its success in the highly competitive US market, where its locally built cars have won a 5.2% market share only 12 years after startup (Mercer, 1995). Honda achieves its success by implementing a wide range of Purchasing best practices. The theme of its success is 'keep it simple'. In this paragraph we concentrate on how Honda manages its suppliers.
Honda started its first manufacturing activities in the US in 1979. These were first focused on the assembly of motorcycles. Later, in 1982, the company started building automobiles in the United States, because of their philosophy to manufacture where they sell. Design and development were at that time done within its advanced technology center in Japan. Now in 1995 Honda of America Manufacturing has extensive design and development facilities itself. It has the lead-design responsibility for the Accord, Civic and the new Accura which will hit the market in 1996.

In 1954, five years before Honda started to export to the US, Mr Honda, founder of the company, set down a company principle which serves as the cornerstone of all Honda activities. He stated in that year: 'Maintaining an international viewpoint, we are dedicated to supplying products of the highest efficiency yet at a reasonable price for worldwide customer satisfaction'. Honda has followed this principle in all markets it serves. Different from other Japanese manufacturers, Honda from a very early stage took an international perspective on developing its business. This implies that Honda will always strive for production in its local markets. This is reflected in its present organizational structure. Activities of Honda Japan are divided over four regions in the world including: North and South America, Europe and Africa, Japan and East Asia. Rather than simply exporting their products, Honda sincerely believes that production should be carried out where demand exists. In order to arrive at this point, four approaches may be used:

1) technical collaboration
2) joint venture with local capital
3) establishment of an independent production entity
4) sub-contracting production.

This applies to motorcycles, automobiles and power products.

So, Honda has a global approach towards its businesses. The automotive activities are grouped around four regions, which have strong responsibility for research and design, engineering, manufacturing and ... purchasing and supply management. Since suppliers formed a crucial factor in the start-up of automotive activities within Honda, supplier management is a crucial element in Honda’s overall business strategy.
Honda's management style is reflected in the way it works with its suppliers. Honda will work with suppliers in order to form a lifetime relationship. Over the years the number of US suppliers has steadily increased (see figure 4.4), giving shape to Honda's endeavor to source more and more parts locally. About 85% of total purchasing spend in the production area now comes from American suppliers.

Figure 4.4  *Honda's supply base for production items*

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Working for Honda as a supplier is a demanding job. A supplier must provide a quality product to Honda. Quality must be built into the product during the production process. Honda considers it the supplier's responsibility and the responsibility of each of the supplier's workers to maintain the highest quality levels. Moreover, once established as a supplier, that company is expected to reduce manufacturing costs through permanent improvements in efficiency, know-how, and overall productivity. And of course that supplier must make consistent on-time deliveries and it should deliver the products arranged in the right sequence. In order to obtain parts which exactly meet Honda's specifications, Honda works very close with suppliers. We will explain this below in Box 4.3.
Box 4.3  Working with suppliers: simple concepts and simple approach

Dave Nelson, VP Purchasing of Honda, provides an example of how Honda may work with a new supplier. They may start working with a supplier who was able to submit a very competitive bid for one of Honda's parts. He remembers one particular case. 'We once got a very promising supplier for one of our parts. Having looked at his bid we decided to visit in order to help him optimize his production facilities. We sent one engineer. He came in, looked at the situation and took off his coat, rolled up his sleeves and asked for water and cleaning materials. He started to clean the production machines. People looked astonished. After a while, they helped him to clean the machines. The next day, the engineer asked for some paint and started to paint the equipment. Next, the workfloor was cleaned and organized. Next came the room for tooling and spares. After a week the whole area looked brand new, it was clean and shiny and it made people feel good. It was only then that he started to look into the materials and production processes.' (Source: Interviews, 1995).

Several steps must be made before entering into a relationship with Honda. This can be very hard, but it is not impossible (see Box 4.4).

Box 4.4  Committed suppliers are awarded new business

'Two and a half years ago, Honda of America was manufacturing the four-door Accord automobile. Through the doors came the president of a company located in Indiana. He met with associates in our Purchasing department and told them he wanted to apply for the jack of our Accord automobiles. I must tell you candidly that at that time our attention was focused on sourcing a number of stamped and related parts, and we did not offer encouragement to him. Instead of going away mad, he went back to his company more determined than ever to become a Honda supplier.

He went to a Honda dealer and purchased the jacks which were being supplied from Japan for our Honda Accords. He took those jacks back to his plant and studied every aspect of their design and function. He assessed his company's capability to manufacture a jack of equal or superior quality.
Several months passed. He again came through the doors of Honda of America and he placed on a conference table a prototype and a quotation of a jack which he declared was superior to the jack we were sourcing from Japan.

And you know what? He was right. We were so impressed with the work he had done to produce a superior part. As a result his company today is supplying the jack in every automobile produced at our Marysville plant, more than 360,000 automobiles per year.

What can we learn from this story? First, a company that had a desire to supply Honda determined precisely what part it could supply. Second, that company did its homework. It thoroughly investigated the part to be supplied. Third, the company assessed its own capabilities and felt confident that based upon its special knowledge and skills, it could provide a quality part. And fourth, the company was committed to establishing a relationship with Honda.'

(Source: Interviews, 1995, and 'Becoming a Honda Supplier', company brochure)

What we see in the different examples of commodity management are two things: first the cross-functional approach where companies involve product specialists and engineering people into the commodity activities. Second, the involvement of the top-management in Procurement issues.

In the past we have often seen that purchasing teams work in isolation and did not have a reporting relationship to top management. There was a lack of involvement. As a result purchasing increasingly steered away from the line. This has been recognized clearly at Chrysler, where top management is actively involved in the buying process for new models (see box 4.5)

Box 4.5  Platform buying at Chrysler

The Product Development Platforms are the heart of the Chrysler organization. Platform Buying does the purchasing for the Product Development Platforms. Each Board member of Chrysler may preside a Product Development Platform for a certain model; apart from this task he has the final responsibility of a functional domain within the company. Mr Stallkamp is head of the Large Cars Platform and at the same time Vice President of Purchasing and Supply. Platform Supply is a separate group supporting the new development activities of
the Platforms. Chrysler has a platform procurement executive on every platform, with a small staff that coordinates all activity from Procurement & Supply into the platform.

Chrysler uses common Procurement & Supply (P&S) processes for the whole company. They have defined eight key processes, including Supplier selection/Development, Vehicle Development and Continuous Improvement. In all of these processes, responsibilities are clearly defined and distributed among the different groups in the P&S department. In supporting the platforms, the Procurement & Supply Department works with suppliers according to these common purchasing and supply processes. To each process they have linked several supplier management tools (see figure 4.5).

An important instrument is Chryslers Suppliers Cost Reduction program (SCORE). This should deliver 750 million USD in savings for all supplies for current models in 1995. All decisions with regard to the acceptance of certain suppliers are made in the Platform; the Platform director may take the final decision if necessary. Chrysler has developed several training programs for their suppliers:

- continuous improvement workshops
- productivity improvement techniques courses
- various programs offered through ICE (Industry Collaboration on Education) in order to develop programs which fit the needs of the large manufacturing companies.

The Purchasing department needs to support both Chrysler's new product activities as well as the manufacturing activities. This inevitably leads to a complex matrix structure, where most purchasing associates may have more than two bosses.

(Source: Interviews, 1995)
4.4 Non-production related P&S strategies

Let's talk about the non-production buying area. A totally different scenario. We definitely see a trend towards more attention to non-production buying. Many companies expect that the share of MRO, or non-production buying, will increase in the future. The benefits that can be found in operations support and maintenance, repair, and operating supply (MRO) purchasing are often not well recognized. Application of modern procurement practices can significantly reduce costs and improve productivity in the MRO area. Conversely, continuing traditional MRO practices can cost millions of dollars needlessly (Cavinato, 1993).
Purchases which can be classified as general expenses or overheads are more difficult to rationalize than production-related purchases, due to their subjective nature. Non-production expenses (products and services) are no core business and have no priority. They are difficult to control, have an extremely subjective image and are dependent on the preferences of the final users. These purchases cannot be categorized or standardized: the needs are dispersed and difficult to describe. Suppliers are generally national, or regional. There is a need for global suppliers in this area, but in many areas they are still not available.

Leading-edge companies are now using their buying power in the realm of business services and supplies - from airplane tickets and telephones to computer classes and laser printer cartridges. Companies are packing once fragmented purchases of services and supplies into one or two company-wide contracts for each. High-volume purchasing can trim bills for services and MRO by 10% to 25% (Tully, 1995).

In general we have found several approaches among the companies, that we interviewed. The most important issues with regard to reengineering the non-production buying process are:

1.) analyse the purchasing spend for each unit
2.) make a list of the items bought and the suppliers involved
3.) try to negotiate corporate contracts with some of these suppliers
4.) ensure that everybody in the company follows the agreements with the suppliers.

After these first steps, companies can choose two directions for managing their non-production buying:

- Systems-supported strategies
- Purchasing card.

4.4.1 Systems-supported strategies

Many large companies nowadays turn to purchasing and supply management in order to reduce their organizational costs. When analyzing the total purchasing spend of the organization, some companies have found that the amounts of money spent on suppliers in the non-production areas far outweigh the amounts spent on production buying. AT&T, for example, found out that they spent 60% of their $20 billion-a-year
purchasing bill on non-production related areas such as travel and car-rental, car leasing, services, real estate, computer hardware and software, construction, maintenance, office furniture and supplies, cleaning materials, green keeping etc. Only 40% was spent on production materials such as printed circuit boards, semiconductors, memories, cable, plastics etc. This was one reason why this company has set up global purchasing organization aimed at creating purchasing synergy between AT&T's divisions and business units. At AT&T, chopping the bill for business-to-business services is a corporate mission. At this moment corporate contracts for travel and hotel accommodation, computer hardware and software, all kinds of services are negotiated with suppliers worldwide. These corporate contracts are to be followed by all divisions and business units concerned, who should order from the relevant suppliers directly.

Among the companies which have integrated this kind of effort into their (global) purchasing operations are IBM, Rank Xerox, and Chrysler. However, getting results from this area requires a thorough analysis and a careful orchestration of the purchasing resources all over the company. Such an orchestration can not be conducted in a haphazard way.

Our general observation is that manufacturing companies are operating more professionally in this area than other companies (see boxes 4.6 and 4.7). We feel that especially trade and retail companies have something to learn in this area (see box 4.8).

The way Xerox deals with this complex set of purchases also illustrates what we found at other companies. This is the reason why we have elaborated on this example.

Box 4.6 Xerox Purchasing Organization

Xerox Corporation is a global company serving the document processing markets in 130 countries around the world. The company's document processing activities encompass developing, manufacturing, marketing, selling, servicing, and financing a complete range of Xerox office equipment and systems. Xerox employs over 87,600 people worldwide. Most of Xerox purchasing is handled by their Global Purchasing Operations that consist of:

- Production Commodity Operations; this group purchases materials, components, designs and assemblies which in turn go into Xerox products.
Ten Commodity Operations Teams oversee and manage the Xerox supplier base for elastomers, plastics, sensors, optics, etc.,

- Strategic Integrated Purchasing Services; this group purchases a broad array of goods and services which Xerox uses for internal support. Purchases include such items as furniture, computers, office supplies, the services of temporary employees, construction equipment, maintenance equipment and supplies, etc. Seven commodity teams oversee and manage the Xerox supplier base for, among others, People and Information Services, Real Estate, Travel, Finance Planning, Leasing & Rentals, Third Party Arrangements, etc.

- Paper, Environment & Logistics Commodity Operations; this group purchases goods and services in support of production and non-production activities. Three commodity teams oversee and manage the Xerox supplier base for Logistics/Transportation, Packaging, and Non-Hazardous Waste Management.

Xerox purchases almost 6 billion dollar a year worldwide: about 1.5 billion of that spend is production buying, and over 4.0 billion dollars is non-production. So, almost 73% of the total spend is in the non-production area. For example, 1.2 billion dollars is spent on taxes and health insurance, and 500 million dollars on transportation. Traditionally Global Purchasing was very much manufacturing oriented, with an emphasis on production buying. Because this is not in line with expenditure anymore, more attention is now given to the non-production area.

In the current non-production buying less than 30% of that spend is on contract. Xerox discovered that these were bought through 17 different complex purchasing processes. Processing was done almost entirely manually. This resulted in long order cycle time, costly and inefficient (manual or non-value added) administration processes, and limited supplier base or commodity management. Most critical of all is the lack of timely and accurate information on this kind of expenditure: what do we buy?, who are the internal Xerox users?, who are the suppliers?, etc., etc.

In 1992 Xerox formed a project team to reengineer the non-production buying process. The highly motivated team is determined to re-engineer the Non Production Purchasing process, and support it with an Information Management Infrastructure so that:
the purchasing community within the corporation can focus on leveraging Xerox's buying power, and,

accurate and timely information can be supplied to all who are involved in the purchasing cycle.

As a result, Xerox expects to move from the current state of less than 30% of non-production purchasing on contract to 85% or more on contract by 1998, while increasing customer satisfaction dramatically. Besides that Xerox hopes to improve the Order to Placement cycle from 10-20 days to 2-10 days, the Invoice Payment cycle from 10 days to 2 days, and reduce Order to Payment Processing costs from $150-200 to $25-40.

In the first stage, the team started with the 'low hanging fruit' to gain immediate credibility and recognition by the internal customers, and convince them of the opportunities in the non-production area. The largest current initiative involves changes in the way Xerox handles purchases under $25,000. Xerox no longer requires extensive supporting documentation for most of these purchase orders. Global Purchasing Buyers are empowered with higher dollar authorization limits, replacing to a large extent the more time-consuming purchase order process for people making purchases under $1,000. This increases productivity for everyone: the customer, the buyer, and even suppliers.

The second stage will be the establishment of the new structure with commodity teams to organize for leverage and to build alliances. Further to that Global Purchasing will introduce quality certification for non-production suppliers.

In the third stage the reengineered process will be supported by an information management infrastructure. This system will contain an enterprise-wide Global Data Warehouse, enabling users to buy themselves, and to find information about contracts, authorization tables, history, performance, payment, etc. Global Purchasing will then only do the planning and the supplier management, and the global contracting. Xerox also expects to use the Purchasing Card in combination with walk-in retail contracts, for the low dollar/high volume items.

In the future Global Purchasing will also, on an ongoing base, continually review and adjust the organizational structure and the skills development and mix. In this way
Xerox is continually leveraging their non-production spend to gain the year over year productivity necessary to maintain competitive advantage.

Today at Xerox, it is the reengineering team that pulls the cart. It presently has a project structure, there is still no permanent organizational structure to leverage the non-production spend. There are companies that already have a central or corporate structure in place for the non-production area, among others Chrysler and Alcatel. Alcatel gives an interesting example of a more permanent structure, their Central Contracting Organization (see box 4.7).

Box 4.7  Alcatel's Comprehensive approach to General Expenses Procurement

Alcatel Alsthom is a leading company in communications, energy, and transport, with 1993 sales of US $27.6 billion, more than 196,000 employees and production plants in 56 nations. Alcatel's Corporate Purchasing has developed a new approach for rationalizing general purchases of products and services. Responsibility for negotiating with suppliers in the area of general expenses is now in the hands of the Central Contracting Organization (CCO).

The CCO is a small regional team made up of people from a variety of disciplines. Their job is to identify and choose preferred suppliers, about whose performance all Alcatel Alsthom units are satisfied, both in terms of total cost of ownership and of service level. The CCO is supervised by a steering committee, made up of the purchasing directors of all units of Alcatel Alsthom. Each unit retains the final responsibility for its own purchases, however. This new approach was initially implemented in France and North America and recently in the Benelux. Its originality lies both in the role given to the steering committee and in the idea of negotiating for all Alcatel Alsthom companies within one region.

The CCO team is a vehicle to improve the global corporate image towards the suppliers, customers, and employees of Alcatel Alsthom. Its role lies merely in the area of cost reduction through economies of scale, through consolidated expertise and through the common methodology and approach. The team will provide the units with the frame in which cost reductions can be achieved.
The focus of the team during the analysis of the project, is on achieving real cost reductions in the units. The project preparation results mainly in well documented requests for quotes and negotiation with the supplier. The team will also make up proposals towards the units concerning organization of the analyzed business. In its role as a consultant, the CCO team helps the units with the implementation and re-engineering of the unit towards the possible cost reduction of the global operations, and the follow-up of the contracts. The steering committee will define the strategy of the CCO operations to the best interest of the Benelux units of Alcatel Alsthom. Its task is to watch over the objectives, budgets and projects of the operational CCO team. Though each unit retains final responsibility, the success of this new approach will depend on the joint support of all units. The steering committee will do everything within its power to make CCO a success and will defend the results of the projects within each unit.

(Source: Interviews, 1995)

Box 4.8 illustrates that non-production buying is sometimes scattered throughout the organization, even in worldwide leading companies.

Box 4.8    Non-production buying sometimes scattered throughout organization...

During one of our visits we encountered a leading trade and retail company in sports and leisure wear. This company operates on a worldwide basis, through exclusive distribution with selected retail chains. Apart from this distribution channel this company has opened up a large number of outlets over the last few years, some of which are operated on a franchise basis. For the coming two years this company intends to expand its own sales outlets with 60 in the US and Europe. After a period of growth, this company was confronted with increasing competition leading to smaller margins. Last year the company had to face a loss. In response to this top management initiated a drastic cost-cutting program.

It found that general expenses and overhead as a percentage to turnover had grown too large. At present this figure amounted to 18% of turnover while a benchmarking study showed a figure of 12% for its main competitors. Top management looked also into its non-trade related purchasing structure. It found out that these kind of purchases were scattered all over the organization. In fact, one was unable to reveal the amount of money being spent in this area.
However, the feeling was that the company could benefit from a more professional and centralized approach.

As a result 150 people were laid off (for the first time). Next it was decided that a central purchasing department would be set up in order to handle all non-trade related purchasing. A purchasing manager was hired to put more structure into the MRO-buying. Three people from a former administrative unit, which was not in place any more due to the reorganization, were assigned to him.....

After a short period the purchasing manager found out that a purchasing department was considered by most spending departments as a distraction to their business. They saw the logic of handling purchasing more professionally, but they did not back up management’s decision to process their requisitions through purchasing...

(Source: Interviews, 1995)

4.4.2 The Purchasing Card

In addition to the systems-supported strategies, some US companies have introduced the Purchasing Card. In recent years corporate credit cards have widened in scope from travel and entertainment purposes to those of non-production buying, facilitating the incidental purchases that offices and plants make at a moment's notice, for instance duplication of keys, or even the buying of christmas trees. Such transactions are too small for national contracts, yet accounting for them costs a fortune in paperwork. Many companies in the US distribute the Credit Cards to foremen, clerks, and secretaries (Tully, 1995). Companies can specify the use and billing so that they can be available, say, for only hardware items up to 500 dollars. The cards incorporate codes that set credit limits and restrict where they can be used and for what commodities (see box 4.9).

At the time of transaction the electronic checking process validates that the type of commodity is allowed, and the person buying is requesting a job code for the items being purchased. The creditcard company pays the suppliers, eliminating thousands of purchase orders and checks. At the end of the month the company receives one bill, hard copy and/or tape, with all transactions sorted by purchaser, store, and/or job code. These systems greatly reduce cash use and provide cost control over the many small purchases often needed in the field or on the spot. Credit Card companies generally provide quickly redigitized hard copies of any purchase slip for verification. In this way the Purchasing Card cut processing costs to a few cents (Tully, 1995).
Box 4.9  Gillette and the Purchasing Card

Bob Edwards, Manager Corporate Purchasing at The Gillette Company sees a bright future for the Purchasing Card. Purchasing in his view adds little to no value to the buying of non-production, Maintenance, Repair and Operations (MRO) items. 'We just take a purchase requisition and convert it to a purchase order and pass it on to a supplier. We have become high-priced clerks'. The cost of processing an order is often more than the cost of goods/services we are buying.

'My goal is to eliminate 50 to 80% of non-value added work from the Purchasing and Accounts Payable Departments', says Edwards. 'First, I have to draw the people, i.e. requisitioners, in to using the Purchasing Card. I want a few restrictions at first on the card, i.e. Dollar-limit per transaction, because otherwise they are not going to use it. I will let them buy almost anything that they have bought previously using a purchase requisition. I want them to get so used using that Purchasing Card that they cannot live without it. Second, in a year's time I will do an analysis of what goods/services have been purchased, and from whom these were bought. After that analysis is done, purchasing will go out and negotiate national or international company-wide-contracts and then restrict the use of the Purchasing Card only to those preferred suppliers under contract'.

Until recently companies could not guarantee suppliers 100% of the business they had contracted for, because employees were going behind purchasing's back and going to other suppliers with their credit card (Visa or Mastercard). The new American Express Corporate Purchasing Card is going to control that abuse. Its use can be restricted down to a specific company(s) that you have a contract with and not just controlling its use by a SIC# (Standard Industry Code number). Says Edwards: 'Office suppliers for example, have stores all over the country. With the American Express Corporate Purchasing Card I can control its use right down to a specific store. This way I can guarantee my supplier 100% of my business, as long as my people are using the AMEX-card.'

Accounts payable will not pay an invoice without the issuing of a purchase order. Purchasing is not going to issue a purchase order, as long as they don't have a purchasing requisition, and if purchasing gets a purchasing requisition they will say: 'Hey, why a requisition? You have a Purchasing Card, buy it yourself!' It's a closed loop. This eliminates the issuing of purchase orders, receiving reports,
invoices and checks. AMEX pays the supplier within 72 hours and AMEX bills Gillette once a month for all transactions.

In the near future Gillette is going to set up electronic yellow pages in their personal computers. When a requisitioner wants, let's say, toothpicks, he or she types in 'toothpicks': the name of the supplier, contact person, telephone number and price will come up on their screen. The requester then calls the supplier and orders their toothpicks and gives them their AMEX-card number. They buy it themselves. It doesn't come through purchasing anymore, it is automated. The purchase order processing costs can be reduced from approximately 125 dollars to less than 3 dollars per transaction. The American Express company has developed the software so they can send Gillette an electronic invoice once a month and Gillette can run it directly into their general ledger. Gillette pays AMEX once a month by doing Electronic Funds Transfer. 'We completely automate the process'.

Says Edwards: 'Now Purchasing is going to add real value in the non production (MRO) area, because we will have the time to negotiate better/more contracts, find better suppliers, and we have the leverage of the total dollars.'

(Source: Interviews, 1995)

The Purchasing Card seems to be a very cost-effective and efficient tool for simplifying the whole non-production buying process, making it less bureaucratic. We found that many companies in the US are way ahead of their counterparts in Europe. However, the biggest impediment to implementing the Purchasing Card strategy is the control factor. How do you ensure that your employees won't abuse the card for their own personal benefit? Important prerequisites are:

- the definition of solid conditions
- good contracts with the suppliers
- active control by line management, and
- immediate action in case of abuse.

There are some other strategies in the non-production area that we encountered, like consortium buying, and the use of trading houses, but they were not expected to take great interest in the near future. Most companies concentrate on the use of the Purchasing Card and the building of systems-supported corporate contracting teams.
4.5 Information support and communication structure

What we are going to see in the near future, mainly in the area of production buying, are worldwide component information systems. Single worldwide databases with complete and current technical and commercial data of all available components, of preferred parts and approved suppliers, alternative suppliers, specifications, and more (with probably over 100,000 partnumbers and hundreds of suppliers). Today all that information resides in different places and in different nomenclature. It is the task of the commodity teams to define the preferred parts and suppliers. This provides an important vehicle to the design engineer, he only has to tap into the system to search for components and select them.

Companies like Ford, IBM, Rank Xerox and Alcatel, will have such a worldwide integrated purchasing system in the near future. This gives them the opportunity to establish a common nomenclature and design between divisions. All divisions will call a certain part the same, will use the same partnumber, and work with qualified suppliers to deliver the common parts under the same nomenclature. Chrysler has already established a central database, and it is working very well (see box 4.10).

Box 4.10 Chrysler's Central Database

Coming from a troublesome situation in the beginning of the 1980s Chrysler has turned into a highly successful and profitable organization, making a 6 billion dollar profit in 1994. Due to its charismatic leader Lee Iacocca Chrysler nowadays belongs to the most advanced and efficient automobile manufacturers in the world. Its time to market is even better than some of its Japanese competitors.

In the early 1980s Chrysler had a lack of focus, leading to a highly decentralized company. Iacocca changed this philosophy dramatically.

Coming from a more centralized led company (Ford), Iacocca lured many senior executives away from its rivals. Nowadays all major business functions are centralized in the new Chrysler headquarters at Auburn Hills, Detroit.

R&D and design engineering take place at the high-tech engineering center. There, reproduction planning is also conducted for its 9 manufacturing sites in the US. Apart from new product development, manufacturing planning and materials scheduling are conducted in a centralized way. Specialized departments within its main building take care of detailed materials scheduling, purchasing,
ordering and transportation for the materials which are required.

This all became possible through the development of one of the most detailed and advanced materials management and purchasing systems in the world. These systems are built around a central database containing Chrysler's huge bill-of-materials. Also central databases exist for partnumbers and suppliers, not only related to production parts but also to non-production buying (investments goods and MRO-materials) and services. Throughout its organization Chrysler uses one single and uniform coding system for parts and suppliers.

Chrysler has built in three so-called screen control points in their eight Key Procurement & Supply (P&S) processes. At these points people check the information systems to see if off-the-shelf technology is available, to identify suppliers and to monitor continuous improvement by suppliers (see figure 4.6).

Figure 4.6  Chrysler's Key Processes
All supplier contacts go through Chryslers Central Procurement and Supply Department. This organization consists of the following sections:

- **Supply Management (SM)**; here all commodity strategies are developed and commodity contracts are negotiated.
- **Platform Supply**, which supports the new development activities of the platforms which exist within Chrysler.
- **Supplier Development Group (SD)**, which helps suppliers to prepare for full-scale mass production.
- **Materials and Supply (MS)** takes care of all materials scheduling and requisitioning, ordering and transportation. It also provides suppliers with vendor-rating schedules.
- **Operations and Strategy Group**. This group deals with all non-production related buying. Moreover, it looks at the production suppliers on a long-term basis. In fact, it determines which suppliers will be invited to take part in future product development projects.

The **Platform Buying, Supply Management (SM), Supplier Development (SD) and the Materials and Supply (MS) groups** all participate, sometimes jointly, in one or more of the company-wide P&S processes defined by Chrysler (see figure 4.6)

These clearly defined and company-wide P&S processes, in combination with the support of information systems have definitely contributed to the success of Chrysler in the last years. (Source: Interviews, 1995)

These kinds of systems will drastically reduce the number of different components/part numbers. It is also a tool to establish commonality. Historically, engineering forces Purchasing to work with multiple suppliers and to deal with many custom-designed parts. Introducing this kind of system can also reduce new product introduction cycle-time. And it reduces cost with a great amount, by using common parts and off-the-shelf parts. In short, by reducing the proliferation of models and parts, purchasing can add savings directly to the bottom line.

However, there are some concerns about ending up with bureaucracy here. Often Procurement owns the database and not engineering. Why? Engineering should finally decide whether or not to use a certain part, and should be responsible for standardization. It is not primarily Purchasing's problem that the company works with
multiple suppliers and many different parts. Management should take action in that, and in fact should impose these targets of standardization on the engineers. Purchasing has to be very careful not to fall into the trap of prescribing what their users are going to use. The database must be a cross-functional project, purchasing participating in it.

If companies are able to succeed in this system, it will give them, beyond doubt, a leading-edge. However, there are examples of companies failing, because procurement took the lead. It was almost impossible to reduce the variety of products, because gradually engineers started to move away from purchasing. It also happened because profits went up, management became lax and gave more attention to other things. This, in those cases, caused these projects to collapse.

4.6 Conclusions

Due to lack of communication and synergy, companies nowadays move away from the business unit structure in its purest form. Where is it heading? We see a strong trend towards more centralization in production and non-production buying. The center-led concept is used to organize the Purchasing and Supply Management function. This means clear direction from top management, and corporate management of global suppliers in combination with bottom-up entrepreneurship and decentralized execution. In the production area we found a strong emphasis on new production buying and global sourcing. There are different solutions possible, like commodity teams, platform teams, or commodity councils. Essential in this approach is the involvement of line management in the Purchasing process. In the non-production area we found that it is important to analyze your purchasing spend, negotiate corporate contracts, work on standardization and ensure discipline. Two different strategies prevail: systems-supported strategies and the Purchasing Card. Finally we explained that information support and a clear communication structure are of great value in both production and non-production purchasing.
Chapter 5
Towards virtual structures in purchasing and supply management

5.1 Introduction

The foregoing chapters are a call for Purchasing action. Purchasing executives need to create a future-oriented vision to guide the function, foster cross-functional groups, redesign and reengineer the purchasing process, and evaluate effectiveness and efficiency of the purchasing process, increase leverage of supplier capabilities, develop global purchasing databases, and identify key purchasing personnel and train them.

The biggest challenge for the future will be how companies will use the purchasing intelligence in the organization. This also means that in our educational systems for both buyers and purchasing managers, we should also focus on developing abilities for change management, social skills, etc.

5.2 Fostering leadership in Purchasing & Supply management

Just a few years ago, Purchasing tended to be regarded as a managerial backwater. In some companies, it still is: purchasing managers are paid less and are rarely promoted into general management. Managers with high potential from other areas are reluctant to accept a job in purchasing; and for many companies, Purchasing is simply not part of the senior management team (Keough, 1993). Purchasing departments experience somewhat of an image problem: they have an 'ivory tower' mentality, and they are often by-passed by internal customers. Says John Gillett of IBM: 'Purchasing people are not seen as key, but as followers, as support people rated below Marketing and Engineering, and they are not in the management team like Marketing and Research. It is a personality-driven activity. They must become a player in company transformation. A strong personality can create leverage and is a player in the management team'. The challenge for purchasing is to develop more competencies, increase customer satisfaction, and increase the contribution to competitiveness.

A fundamental change is required from a supporting and stand-alone purchasing department, to a strategic, totally integrated department with a global instead of a local focus, and with more highly educated and skilled people. Moving to such a strategic approach is not easy. It requires strong, visionary leadership (see box 5.1).
Box 5.1  *Thoughts on Leadership*

There is an interesting comment on leadership quoted in the biography of Saint-Exupry, the French aviator and writer of the world-famous book 'Le petit prince'. In 1941, with France in mortal peril, Saint-Exupry wrote: 'On what does our salvation depend? On leaders. But we must agree on what we mean by a leader. A leader is one who governs without doubt. The manager governs, but also he arbitrates and administers. A manager is not a leader... A leader is one who needs us, needs us ardently. He... solicits not only our effort in the task at hand but our constant invention, that which transforms us into creators. Because he needs our creations... Almost anyone can give orders, can impose himself upon us from the height of a throne. But in what way do these posturings of a corporal have anything to do with authority? Authority entails creation. Leading is needing'.

(Source: Fortune, July 10, 1995, p. 122)

'When moving from a clerical ordering function to World-class Purchasing and Supply management', the importance of leadership and CEO support increases', says Mark Keough (WESCO). The caliber of the VP Purchasing in many companies is not top, so they are whining that they can't make a difference. Developing the Purchasing function requires a strong Vice President of Purchasing, who takes responsibility for the function. Take the Chief Financial Officer as a role model, he is the leader, the guardian, the guru of the financial function. In purchasing there is a good story to be told, but you need the right person to tell it.

Getting involvement from top management is a people's issue. You need a person with general management capabilities, a well-respected and recognized senior business person with the right chemistry. When in place, the new VP should first pick the low hanging fruit, hit a few home runs, some early wins, to increase credibility to top management and organization.

Purchasing seems to be getting new prominence, as is illustrated by the increased media attention and the fact that companies like IBM, AT&T are moving senior high-potential executives into purchasing (see box 5.2). According to many people in the field, purchasing is a powerful source of competitive advantage.
Box 5.2  AT&T's new Chief Procurement Officer

AT&T's globalization effort over the last 10 years has been driven by acquisitions and joint ventures. This led to a highly fragmented structure: different companies with different cultures and backgrounds. Also the purchasing structure was becoming very fragmented and had no common philosophy. AT&T needed a global approach. With the nomination of Dan Carroll, a former successful CEO of the $6 billion-a-year division that manufactures switching equipment, as the new chief Purchasing and Supply management, AT&T brought leadership, vision to Purchasing. AT&T is beginning to change the face of Purchasing into a high-glamour area, due to this highly respected senior executive. As a result AT&T is not hiring senior high potential purchasing executives but is moving high potential executives into purchasing (Source: Interviews, 1995)

Leadership should address questions like: how to create a vision in Purchasing, how to manage change in Purchasing, how to become a player in the field, instead of assuming responsibility, and acting as the consciousness of the company. The new VP Purchasing should diminish the functional focus of the purchasing professionals, and bring purchasing more into the line. The more Purchasing managers claim the purchasing function, the more they have to explain why they do things the way they do. The VP Purchasing should bring modern Purchasing much more to the line managers: Research & Development, design, and manufacturing people, etc.

5.3 The virtual purchasing organization: hard-core and soft-core professionals

An ever more demanding competitive environment requires ever higher levels of corporate purchasing performance. The trouble is that performance improvements which are needed often remain out of reach for purchasing organizations organized in the traditional 'vertical' fashion: hierarchically structured, functionally oriented. Years of experience have shown that the crucial advantage of vertical organizations is functional excellence. But their central dilemma is coordination - across tasks, across departments, across functions. By contrast, there is real performance leverage in moving toward a flatter, more 'horizontal' mode of organization, in which cross-functional, end-to-end work flows link internal processes with the needs and capabilities of both suppliers and customers (Ostroff, 1992). The practical question, of course, is how to build such
organizations. As always, each company must seek its own unique balance between the vertical and horizontal features needed to deliver performance.

A possible model for future Purchasing organizations to make simultaneous improvements in both increasing functional expertise and economies of scale, and improving focus and flexibility at the business units level, could be the hard-core/soft-core organization. This model is especially appropriate in the non-production area (services, investments and equipment), where buying is of an ad-hoc nature, and where specific expertise is needed temporarily. In this situation it does not pay to build up specific expertise within the Purchasing function. We will explain this in more detail below.

In this organization you will have a small centralized global hard core with purchasing professionals responsible for: the Purchasing and Supply management process, Purchasing Information systems, purchasing strategy, strategic relationships, professional development, training and management development programs. This hard core resides mainly at headquarters, and will be very small (about 20 to 30 people for companies as large as Alcatel Alsthom and IBM). These hard-core professionals move from setting up a particular purchasing process, and all of the support that is needed there, to whatever the next major project is.

This hard core farms out all business-specific purchasing responsibilities to a soft-core group aligned with each business unit. These satellites are fully integrated, reporting along double solid lines to both the centralized purchasing function and the business unit. The key to this double line structure is teams. The people in the soft core are members of two teams. The business unit team is responsible for developing and executing business strategy, which ensures tight links, and common objectives, between businesses and purchasing. The purchasing team, comprising purchasing peers from each business unit, works on building an effective professional purchasing community, developing people, and sharing best practices. In this way, members of the business unit teams have a greater sense of shared purpose, and Purchasing is now much more closely aligned with the needs and objectives of each business unit. Purchasing can become more aggressive about finding opportunities and leverage it, increasing synergy.

The soft-core group is a group of business specialists who come and go, depending on the purchasing needs of the company at a specific time, in a specific place.
They are the real on-the-spot purchasers, with the authority to make decisions how one can best meet local needs. The hard core backs them up with sophisticated tools, like state-of-the-art information systems, financial rewards, and old-fashioned cheerleading.

The soft-core professionals work in their functional area, in various places in the organization, with important contracts where they act as commodity leaders. The commodity leader is the one who knows most about the business. He or she reports to the Vice President Purchasing and Supply, who will control the working methods. This means that Purchasing has to consider these people by formulating their policy, providing them with tools for this, and training them, but most importantly by letting them do the job, because they know what is best.

For example, in this new situation hiring consultants is best done by top management. Purchasing only warns managers how to deal with consultants and tell them what a contract with a consultant looks like. You have to let top management do the job, don't try to take it away from them (see box 5.3).

Box 5.3 The Bank of Boston

Says Ron Payne from Purchasing Services, Inc.: 'At a leading New England bank the law department spends approx. 18 million dollars a year on services of lawyers, as a supplement to their own law department. They have a commodity manager, who is not a purchasing person at all, sitting in the law department managing that complete 18 million dollar budget for them. This in my view is an ideal situation. You don't need a person with a purchasing title sitting in the law department doing that work, when in fact this person was recognized as an outstanding staff person for the law department. This staff person said: 'I know what the requirements are, I know the business, I understand the business plan, and I understand what we are going to need to supplement from the outside law firms in this department, and I've got a process for people who want to use outside law services'. Now, he is managing that 18 million dollar very well. He even reduced the number of suppliers significantly. There is no value added that a purchasing commodity manager could do, just because of purchasing. This staff person is a part of the purchasing department only to the extent that the VP purchasing has a process and a definition on how you contract for temporary help.
If such a process is not in place, people in the business units will set up their own invoice and billing process, which will most likely be very different from the corporate purchase order, invoicing and billing process. We said to the VP Purchasing of this bank, it makes sense for you to have a process that is enterprise-wide that will support also other non-traditional purchasing expenditure'.
(Source: Interviews, 1995)

With services, like cleaning in large bank organizations with 400 offices that all have to be cleaned, it is different. Then it pays to free up one person to build up some expertise. This person can reside within Purchasing, but it is not necessary. If we say it is inside facility management, then this person becomes the commodity leader who reports to the VP Purchasing and Supply for that part. He will have at that point, two bosses. This is something that must be possible. However, only on condition that the two bosses understand each other very well, otherwise you will have all kinds of political games. More and more companies introduce these kinds of dual command lines in their organization, to link the different company-wide processes with each other (see box 5.4).

Box 5.4 Two heads may be worse than one

Large US car maker General Motors recently installed a new product development structure, one with two heads. 'This reorganization attempts to yoke GM's contentious car design, engineering, and manufacturing fiefdoms more closely to its powerful marketing kingdoms. The goal: to speed developments of new models by 25%, to 36 months, and slash engineering costs by 30%. We've got to do it all', says GM's CEO John Smith. Failure means GM will fall even further behind in the critical race to rush competitive new cars to market. Toyota can bring out a new car in 30 months, versus an average of 48 months for GM. GM has too many cooks making the stew.

GM's new recipe is a convoluted concoction of two parts Toyota blended with a dash of Procter & Gamble. Firstly, it will appoint 16 to 18 Toyota-style Product Czars, known in GM-speak as 'Vehicle Line Executives', or VLE's. These managers will rope together quarrelsome designers, engineers, manufacturing and marketing executives, and others to design and build cars and trucks. They are expected to be young hotshot engineers or designers who have no ties to the old
GM school. They are to stay in their jobs for up to 10 years -through two cycles of their vehicle- a far longer job tenure than GMers usually have. Secondly, GM is also setting up 36 Procter & Gamble-style Brand managers who decide the pricing and market positioning of new models. GM will hold both halves of each powerful duo accountable separately for earning a profit on their vehicle. These changes mark big progress. They used to have hundreds of people making these decisions, and now they have got it down to two.

GM's unwieldy new two-headed system is raising eyebrows. 'GM's efforts to simplify itself have created an ever more complex structure, one still driven by warring factions. This is bound to cause turf battles', says a former Chrysler manager. 'GM still seems to want an adversarial relationship between the guys who build the cars and the guys who sell them'. As the new managers take control of individual models, the powerful heads of GM car and truck divisions will lose much of their clout. Even GM admits it must shed its tradition of infighting. Behaviors are going to have to change if this is going to work. (Source: Naughton, 1995).

The glue that will hold the building blocks of tomorrow's purchasing organizations together will be provided by processes and cross-functional teams, rather than the traditional functions or business units. Cross-functional teams will be organized around key projects. Their role will be to manage across the functional and business unit silos that get in the way of serving customers superbly (see figure 5.1).
This is a much more difficult concept than the idea of 'we as Purchasing should impose procedures, and everything should go through purchasing'. This requires a lot of clarification, modeling and experimenting. This new model cuts across functional boundaries. The one thing that purchasing needs to do that is absolutely certain, is to ensure that there are horizontal processes that provide maximum leverage across the enterprise.

It could be the model of the future, providing the right infrastructure and processes to embed the operation. In that way purchasing acts more as a facilitator and a process agent, rather than an executioner. That deviates to a large degree from what many companies are doing now. We are talking about the late 1990s, early 2000: it's going to be a major transition for a lot of people and a lot of companies, but it is clear where we are heading (see box 5.5).

Box 5.5  **ALCATEL**

*Alcatel Alsthom is a major industrial group operating worldwide in Communications, Energy and Transport, and Services. Alcatel Alsthom turns over 23,6 BECU with a workforce of 196,500 people (figures from 1993). Alcatel is a division of Alcatel Alsthom, and has a leading position as a global supplier of*
high-quality telecommunication products and cables. Alcatel operates a flexible purchasing structure which has led to both an improved supplier portfolio and price reduction, mainly in the production materials area. Says Pornet, Director of Purchasing, 'We created a 'virtual corporate purchasing organization', made up of the part-time contribution of experts in the subsidiary companies, and a small central (headquarters) staff who manage them' (see figure 5.2). It was considered particularly important to keep the experts close to real life in their company, and not put them in an ivory tower, out of touch with real daily issues. This virtual organization comprises:

- Working group leaders; contracting, negotiating, forecasting
- Corporate Commodity Managers; technical/standardization experts
- Advanced Procurement Experts; development to suppliers, new technology, product/application specialists
- Purchasing logistics; EDI, supplier rating, ship to line, etc.

Figure 5.2 Alcatel Corporate Purchasing organization
They each take full corporate responsibility to manage their area of competence (production, non-production, specific to product lines and specific to regions). They will draw upon experts from across the corporation through specialist working groups where strategies are set by consensus. The results are always implemented locally; for example, purchase orders are all raised in the subsidiary company, but referencing the corporate contract. It has been found that some commodities require greater than part-time management, and it has not been possible to leave these in the hands of part-timers where local pressures tend to take priority.

This strategy of 'virtual centralization' only became possible with the creation of a database accessible via a common network, where the subsidiaries enter their requirements and preliminary allocations per supplier, and the working group leader extracts consolidated figures for negotiation. He then enters the resulting prices, terms and conditions, and these can be downloaded for local application in the call-off process.

The delegation of responsibility (for negotiation, standardization, etc) to an expert in another subsidiary company was only possible because each subsidiary:

- took a fair share of the work
- trusted others to perform
- participated in the working groups
- established excellent communication.

The pooling of requirements for production materials produced an immediate cost saving on 'standard' parts (typically 20% can be achieved when a new subsidiary joins the group), and a consistent year-on-year reduction of the order of 6% has been achieved. 'Specific' parts take longer to cumulate, since common coding is needed to identify when the specifications are the same and the requirements can be consolidated. The benefits were quickly tangible in immediate (one-off) price reductions due to cumulated volume, and this inspired confidence in next-level programs such as standardization, where returns would be longer term.

(Source: Pornet, 1995)

More and more the real work of Purchasing is carried out in cross-functional teams, that are aligned with key business processes, thus eliminating the need to take decisions up and down either functional or business unit ladders. Functional roles will,
however, still be important for coordinating activities, handling personnel issues, developing specialized expertise and achieving scale economies. But the day-to-day work will be done in the cross-functional process teams. This will enable companies to strip out unnecessary layers, that raise cost, create extra work, slow decision making and fragment activities.

Senior management must ensure that the right structures, roles, and leadership are in place to enable the teams to function. Building strong teams rather than strong functions becomes the critical senior management goal. The hardest thing will be installing the new culture; making the transition from a relatively simple structure to one in which process-based teams dispersed throughout the organizations deliver value to customers. Those that meet the challenge, however, will enjoy an important competitive advantage.

5.4 Staffing, hiring and training future purchasing professionals

When the business environment changes, the skills mix must shift with it. For a long time Purchasing was the dumping ground of many companies, a dead-end job. Now leading-edge companies try to make it a career opportunity, with professional training and management development programs. Today, Purchasing and Supply management is perceived as a critical business function. Its impact on the business is increasing. Financial results depend to a high degree on how well companies manage their Purchasing and Supply operations. This in turn requires people with a different skills profile.

The buyer role and the skills profile of the purchasing professional are changing from a direct to a more indirect role. They will, probably, hold overall responsibility for the purchasing process, but will move towards a facilitating role, in order to support the core processes with answers, information and solutions, and provide the required infrastructure (purchasing systems, EDI, MIS, etc.) to enable the users to buy themselves.

The purchasing professional of the year 2000 is going to be a business person. A person who has a long-term view, a strategic focus, a CEO orientation and a good understanding of the general business. He will have a greater willingness to take risks, whether that means linking up with other purchasers to pursue more effective and efficient buying, partnering with a major supplier in a new business approach, or working
with manufacturing to explore more efficient supply chain operations. Furthermore, tomorrow's purchaser must be both a team member and a team leader: a facilitator and consensus builder. The top ten skills for Purchasing professionals in the future are: (Kolchin, 1993)

1) Interpersonal communication 6) Managing change 2) Customer focus 7) Conflict resolution 3) Ability to make decisions 8) Problem solving 4) Negotiation 9) Influencing and persuasion 5) Analytical skills 10) Computer literacy

What buyers roles are needed in the future? In general we will see that, in the future, companies will need two types of Purchasing professionals, one for the critical purchasing areas: production-related materials and services, and one for the non-critical purchasing area: non production (see figure 5.2). In addition to that they will need local buyers, who will work locally with the supplier on continuous improvement.

Figure 5.2 *Production versus non-production buyer profile*

<table>
<thead>
<tr>
<th>Production</th>
<th>Non-production</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Functional specialist</td>
<td>• Generalist</td>
</tr>
<tr>
<td>• Engineering background</td>
<td>• All-round background</td>
</tr>
<tr>
<td>• Working in cross-functional development teams</td>
<td>• Facilitator / process consultant</td>
</tr>
<tr>
<td>• Product / market knowledge</td>
<td>• Process knowledge</td>
</tr>
<tr>
<td>• Career in Purchasing</td>
<td>• Career in general business</td>
</tr>
<tr>
<td>• Managing commodities</td>
<td>• Managing relationships</td>
</tr>
<tr>
<td>• Global scale</td>
<td>• Regional scale</td>
</tr>
<tr>
<td>• Corporate / divisional level</td>
<td>• Corporate / divisional level</td>
</tr>
</tbody>
</table>

(Source: Interviews, 1995)
Equipment buying is also considered part of non-production buying. For the investment/equipment buyer we feel a similar profile to be appropriate as for the non-production buyer. However, the investment/equipment buyer should, in our view, also have a specialist engineering background.

Today, many companies are gradually building the skills of the new purchasing professionals by changing hiring criteria, by establishing training programs, and by developing cross-functional career paths to broaden their understanding and exposure.

First, how do companies hire the right purchasing professional in this new business climate? Many companies we visited now have a minimum entrance level, and try to bring in only graduated people, sometimes even with dual degrees (see box 5.6). These new people will gradually replace the old traditional purchasing people.

Box 5.6  IBM on Hiring and training

IBM has introduced a new recruitment program where IBM goes to a select group of universities, and hires graduate level, dual degree (technical and business) people, and brings them in on a two year of additional assignment training program 'Procurement Leadership Program'. The selected individuals will be placed in different divisions for 6 months, in different procurement and supply-chain oriented jobs. At the end of the two years it is up to the different divisions to say: we want this person and we're going to pay him this much. It is a pool, where IBM brings in a select group of new people every year. IBM feels this will give them a core of highly skilled, very bright people that will come with new ideas. All newcomers to purchasing undergo a 4-week training program during their first twelve months. The objective is to provide a basic understanding of the business environment, with a commercial orientation rather than an administrative one (see figure 5.3).
IBM also has what they call a 'shadow' program. In this program IBM brings in high-potential procurement young executives from around the world to shadow one of the top executives for a period of 6 weeks. They become the shadow of that executive; they go to every meeting, to every discussion, and they are expected to contribute and participate. At the end of the 6 weeks the executive will give the 'shadows' and their management feedback, and then the 'shadows' go back to their locations and try to bring back whatever they saw and learned.

Typically, a person will spend three or four years in Purchasing and then move to another function within the company to acquire new skills and experience. Today, about one third of the people hired into purchasing come direct from University. Another third are experienced people from other companies. The rest are internal transfers from Marketing or Finance. There is a major emphasis in IBM, in the area of skills, driven by CEO Gerstner. IBM formed a worldwide Procurement Training Council representing the pro-
curement communities from around the world. The council consists of 20 people who come from production, non-production, and from the different divisions. They gather face-to-face quarterly, and every other week they have conference calls; in addition they communicate via E-mail. This council determines the needs with regard to skills and training. The council determines what the urgent, most critical gaps are and what to do about that. The council also tries to formalize the training program. All this is to give the people the skills, to make them able to participate in the new world of procurement.
(Source, Interviews, 1995).

Box 5.7 Chrysler on hiring and training

Chrysler has a detailed and differentiated hiring procedure for new Purchasing and Supply personnel. They do active campus recruitment from Universities and Business Schools with purchasing management programs (Michigan State, Arizona State). Candidates are offered a summer internship for two months in order to see whether they fit in for the job. If positive, they will move to a 2 year rotation program, where they learn every aspect of the purchasing and materials job. After two years they may get tenure. After that time Chrysler expects each employee to take internal courses. Chrysler looks for a high-impact training process, that ties their training program into key business issues and goals. The internal training program consists of compulsory and optional courses (see figure 5.4). Finally, most purchasing employees must actively participate in a job rotation program in order to get promoted. You can't get promoted until you have broadened your base. With this rotation program Chrysler has made it very clear that they want cross-functional development.
The output of the learning intervention should be improved skills of knowledge, with that improved job performance, and with that improved business practices. Eventually all this should have a positive impact on the key business issues and goals.
(Source: Interviews, 1995)

Finding people to do all the new purchasing activities well is not easy. Education and training are key. Because of downsizing, smaller departments, and a constantly changing environment, purchasers must engage in training on an ongoing basis. The purchaser will also have to be much broader in terms of business perspective and general management capability. In this way, the purchasing executive will view the organization from a bottom-line perspective rather than a functional perspective.

5.5 Conclusions

In today’s competitive environment purchasing organizations must make simultaneous improvements in both increasing functional expertise, and improving focus and flexibility at the business unit level. A fundamental change is required from a supporting, and stand-alone purchasing department to a strategic, totally integrated depart-
ment with a global instead of a local focus. This means we can't look at Purchasing as a separate function, but must view it instead as a horizontal process. Functional silos will become obsolete. More people will take on project work focused on improvement of one kind or another. Moving to such an process orientation is not easy. It requires strong, visionary leadership.

A possible organizational model for the future could be the hard core/soft core model. In this model a hard core of corporate Purchasing professionals is surrounded by a soft core of business specialists. The hard core is responsible for the Purchasing process, the strategy, professional development, and the recruitment, training and development of the people involved in the process. The soft-core specialists are the real on-the-spot purchasers, with authority to make decisions how one can best meet local needs. In order to make this model reality companies need to upgrade their purchasing community. The future purchasing professional needs different behavioral skills and capabilities. We see two different generic buyer roles: the production buyer, a product market specialist with an engineering background working in cross-functional teams, and the non-production buyer, a generalist with an all-round business background working as a process consultant and a facilitator.

Today many companies are building the skills of the new purchasing professionals by changing hiring criteria, by establishing ongoing training and management development programs, and by developing cross-functional career paths to broaden their understanding and exposure.
Chapter 6

Epilogue

6.1 What have we learned?

The preceding chapters have described the major changes which affect the purchasing and supply function in international manufacturing companies. As we have demonstrated, the dramatic changes, which are currently going on in purchasing and supply management, cannot be viewed in isolation. They are, without exception, related to the major competitive challenges going on in the international business environment. In order to survive in the future, many managers need to rethink conventional wisdom, rethink their competitive priorities and rethink their value chain. As they do this, they cannot but rethink the current role and position of their purchasing and supply operations and strategies.

At the end of this report the major forces, which in our opinion drive purchasing and supply management professionalism, are summarized.

Next we will describe the most important issues which are relevant when managers want to provide guidance to their future purchasing and supply strategies. We will present these by means of a coherent research model.

Finally, we will address the major roadblocks, which in our opinion will dramatically limit the advancement of the ideas which we have put forward in this report. Most companies will not be able to escape from these roadblocks and they will therefore be of decisive importance to a company's future.

Given the methodology of our research, we are aware that the observations which follow are not without risk. Therefore we stress that this epilogue reflects to a high degree the personal view and opinion of the authors of this report. We nevertheless present them for two reasons: first we think practitioners can benefit from these personal insights because our observations will focus on the headlines, i.e. the driving forces for fostering professionalism in purchasing and supply management. Secondly, we feel our insights may be also useful in guiding future research in this area.
6.2 Driving forces to the advancement of purchasing and supply management

Apart from Japanese companies we have visited, most leading-edge companies in the area of purchasing and supply management share the same background. All have been confronted in the past or recently with severe business problems and/or severe international competition. Fast and severe loss of market share in major end-user markets, difficulties to keep up with technology, loss of customer orientation, internal management problems and different insights on how to cope with competition have led to dramatic financial losses, affecting the company’s cash-flow and capital structure. An example is Rank Xerox, which was confronted in the early 1980s with extreme loss of market position worldwide. As a result Rank Xerox decided to find out where things went wrong. They did this by benchmarking all the company’s activities against those companies that were considered Best-In-Class. In fact they were the inventors of ‘Benchmarking’ as a competitive tool, a practice which now is widespread within industry. As a result of this exercise they made drastic changes in their business strategies and organizational structure, one of which was the decision to centralize all purchasing operations worldwide.

Other more recent examples are IBM, Compaq and Digital. These companies recently had to face (albeit in different degrees) sincere financial losses. In order to overcome them, these companies dramatically changed and improved their purchasing strategies and policies.

Finally, some striking examples can be found, of course, in the automotive industry. Chrysler’s leading-edge position in the area of purchasing can be explained by, among other things, their almost desperate financial position in the early Eighties. The restructuring of purchasing operations at General Motors was caused directly by their massive losses in 1991 (which at that time amounted to 8 billion dollars). Due to their highly center-led, cross-functional and global approach to purchasing operations this company was able to report a profit of 11 billion dollars in 1994.

This factor of severe competition cannot be used to explain the leading-edge position in purchasing and supply of some major Japanese manufacturers. Here we feel that management style is the dominant variable that determines their long-term market position. For practical reasons we were not able, unfortunately, to include major
Japanese companies in our research. Therefore our observations on this subject can only be superficial.

Taking Honda of America as an (inspiring) example we feel most Japanese manufacturers have little to fear from their fellow American and European competitors. Japanese competitors in fact do not compete on product technology, as is sometimes mistakenly assumed. As we see it, they do not even compete on process technology. In both areas a headstart in knowledge, as they are aware, can only be temporary. In a couple of months, certainly in today's 'information highway-based' global economy, such knowledge can be easily acquired, adapted, improved and applied.

The real competitive power of these companies stems from their highly effective management style, which puts a strong emphasis on implementation of new technologies and continuous improvement. Next it stresses company-wide values. It is aimed at constantly motivating and tapping the company's human resources. Apart from this we think the explanation for the success of many Japanese manufacturers should be sought in the active management of their customer and supplier networks. It is here where most Western manufacturing companies lag far behind.

In short, we feel that the development that companies may go through in the area of purchasing and supply management may be influenced by (a combination of) the following factors:

- **Maturity of end-user markets.** In the early stages of the industry life cycle (introduction and growth), companies may derive their market position from advanced product and process technology and, later, from being able to tailor their products and services in a unique way to predefined market segments. As industries move to the next stage (maturity), individual companies derive their position predominantly from superior operations. As product differentiation between them and competitors becomes less and less, companies should be able to offer similar products and services against a better price-value relationship. At first companies try to realize this objective by putting more emphasis on cost control and cost reduction, total quality management and integrated logistics. In order to survive in the longer term, however, more drastic adaptations are required. At this stage companies will adopt an active make-or-buy policy, resulting in putting more emphasis on core activities, whilst outsourcing non-core activities. It is clear that
companies, operating predominantly in international competitive industries will gradually make more and higher demands on their purchasing and supply operations.

- **Informations and telecommunications technology.** Our investigations have made it clear to us that companies that are able to master and adopt state-of-the-art information and telecommunications technology will have the future. Taking advantage of global sourcing opportunities will require fast, accurate and efficient computer and network facilities. In this way we see this factor not per se as the driver of gaining more professionalism in purchasing and supply management; rather, it is the enabler without which advancement in this area will not be possible. As investments in this area only pay off only some time after they were made, we expect that the future winners are already known at this time. This of course also holds true for the losers. These will be the companies which have invested only marginally in this topic. For these companies it will be very difficult to catch up.

- **Business strategy.** Over the last decades we have seen major shifts in strategic thinking. The financially-oriented, portfolio thinking of the early 1980s has been replaced by 'benchmarking', 'value-management' and 'competitive strategies' of the late 1980s. Now we see that strategic priorities have changed again to 'value-chain-management' and 'time-based strategy'-concepts. Over the years strategic concepts which advocated centralization, have been replaced by 'business unit'-models, which promoted lean headquarters and a large autonomy for operating company managers. Currently we see that the 'business unit' model has been left by many large companies, that increasingly adopt centrally coordinated, center-led business models. In these models a large degree of autonomy is still granted to the operating companies. However, some of the corporations strategic (support) functions are directed from the top. Purchasing and supply management is clearly one of these, which means that for some, predetermined commodities and services operating companies have to accept corporate guidelines. More essentially, they need to participate in the agreements, which have been negotiated for the total of the corporation.

In some of the companies we have seen, purchasing and supply strategies are directly derived from the company's customer strategy instead of from the 'activity-
next-in-line’ (which may be engineering, manufacturing, logistics). Purchasing decisions in those cases are tested against the increasing value that is derived from them by the customer. We feel this concept will gain more value in the near future.

- **Management style.** Managing multi-national manufacturing companies effectively has become more and more difficult. Currently, there is no general agreement on what the style of the leader should be. Clearly, the most effective style to pursue is situation-specific and often (as we have seen in many major turn-arounds) person bound. Successful management of multi-unit corporations requires a clear vision from the top; at the same time the top management should be able to stimulate initiatives from the 'bottom'. This requires a delicate balance between a directive style of management and a more supportive, facilitating style of management. As we see it, this in particular is a key success factor in dealing with corporate purchasing strategies and structures, where operating company managers can often feel abused by direction from the top. In developing a corporate vision on purchasing role and structure, back-up or sponsorship from the top is not enough. Top managers should personally engage in getting these implemented. Active support to operating company managers and purchasing staff is a prerequisite!

This point is particularly important since we have seen in the past that many companies have been able to develop all kinds of (corporate) purchasing strategies. However, due to the fact that top managers were involved in their implementation only in a minor way, most of these strategies have failed.

6.3 **Future issues in purchasing and supply management**

What will the future look like for purchasing and supply managers? What issues need to be addressed? What will determine their success in the future? These questions will be addressed now.

Based on the previous chapters of this report we feel that general managers and purchasing managers need to address the following issues in order to be able to develop the purchasing and supply function within their company. These have been illustrated in Figure 6.1. As this Figure shows three concepts are directly related to the company’s customer strategies.
For the near future we feel that the following three issues need to be addressed:

- **Leadership.** In the past, purchasing and supply has suffered from lack of top management support in many cases. Many purchasing managers have complained about this and many scholars have written about this. As we see it lack of management support is not the real problem that explains why the development of purchasing has lagged behind those of other business areas. The real reason was lack of leadership, both at the top level and the purchasing operational level. One of the themes that top managers and purchasing managers need to solve therefore is how to develop leadership in this important business function. Here, attention should be given to subjects like:

  - how to develop a corporate vision for purchasing and supply management?
  - how to get commitment from operating companies and purchasing managers?
  - how to communicate this vision?
  - how to become a player in major purchasing decision making, instead of assuming responsibility and acting as the consciousness of the company?
  - how to manage organizational change in this area?
Motivation. Over the years much attention has been given to purchasing procedures, techniques and tactics. Our knowledge on these subjects has, however, solved very few of the problems that companies face nowadays in the purchasing area. We feel that this is due to a lack of understanding of the 'soft' issues of purchasing strategy, structure and decision making. What motivates managers, middle managers and staff to make decisions in this area? How does this kind of decision making influence human behavior in organizations? Our understanding of these issues is almost nil. In order to improve purchasing decision making companies need to find out what motivates people to support them. It means that subjects need to be addressed like:

- how is human behavior affected by purchasing decision making?
- what organizational status is derived from such decision making?
- to what degree should people be empowered in this respect?
- how do people influence each other in purchasing policy and decision making?
- what reward structure should be put in place in order to stimulate effective purchasing decisions?

Performance. Given purchasing’s share to total turnover in the average company, it is clear that purchasing and supply management can and should contribute to the company’s bottom-line. The idea of getting purchasing performance registered, measured and monitored is an old one, which is, however, still very topical. Leadership and motivation are prerequisites for improving purchasing performance. Improving purchasing performance requires setting of targets, measuring actual versus planned performance through a coherent set of indicators, monitoring the variances and taking corrective actions when appropriate. We feel that in order to tackle these subjects properly, the following issues need to be addressed:

- how to develop a strong performance orientation in purchasing and supply management?
- how to consistently work on cost control and cost reduction?
- how to benchmark purchasing performance against BIC-competitors?
- how to develop a coherent set of performance indicators in this area?
- how to benchmark our current supplier base against BIC-suppliers?
These issues have received very little attention so far, both in business and in academia. However, we feel that these need to be addressed in order to get a better understanding of how to foster professionalism in purchasing and supply management.

6.4 Limitations and roadblocks

What will hamper the advancement of modern purchasing and supply management concepts in practice? Of the many roadblocks, we mention only a few important ones:

- **Lack of leadership and vision.** Although we have mentioned this factor in the previous paragraph, we want to stress here that when companies are unable to develop true leadership in purchasing and supply management, which is respected at various levels in the company, many initiatives will fail.

- **Functional focus.** Purchasing and supply management are truly cross functional in nature. These processes cut entirely through the company's organizational hierarchy. In the past the process and cross-cultural character of this business function has been insufficiently recognized, which has resulted in sub-optimization and a lot of political and boundary problems. As we see it, this business function has been claimed too much by purchasing managers and buyers, resulting from too functional a focus on this domain. We strongly suggest that purchasing managers and staff dispense with this narrow-minded orientation. We feel that purchasing issues are too important to leave them only to purchasing professionals. However, we are aware that adopting this idea in practice will create quite a stir and will therefore take a lot of time.

- **Skills development.** The importance of communication and inter-personal skills has been greatly underestimated in purchasing and supply. Many companies nowadays still lack a clear and concise human resources policy on hiring, selection and training for this business area, even though human resources are the crucial success factor in this area. Many managers define the role of the purchasing function based on the people currently employed there. Most buyers have been recruited without any strict policy. This leads to a vicious circle which can only be broken through breakthrough decisions!
6.5 Revolution required

As we have seen, most Western leading-edge companies in the field of purchasing and supply management share a similar background. Most of these companies have gone through difficult times, in which the continuity of the company was in jeopardy. Stringent cost reduction was required for survival. Looking at their cost position and value chain, these companies decided to change their purchasing policies and strategies in a drastic way. New managers and staff were sent in, cross-functional teams introduced, local sourcing replaced by global sourcing etc. All in all these companies took an aggressive, business-like approach to their purchasing decisionmaking.

We feel that the functional orientation towards purchasing and supply is its biggest barrier. Maintenance of the status quo and a more gradual, evolutionary pattern of change in this function might seem more attractive to some, and many managers may be comfortable with it. However, those managers should realize that the changes we are confronted with now are of a discontinuous nature. When considering a reorientation of purchasing and supply operations we feel that a drastic move from the past may be warranted. In those circumstances revolution, and nothing less, will be required!
### Appendix I

**List of organizations visited and persons interviewed**

#### Europe

**Alcatel Bell Telephone**
- Mr. F. Tilsley, Director Integrated Materials Logistics
- Mr. F. Clauwaert, Manager Procurement Production Materials and Components

**AT&T Network Systems Netherlands**
- Mr. B. Calabro, Purchasing Director

**Coopers & Lybrand Management Consultants**
- Prof. dr. J. Telgen

**InnovatieCentrum Noord & Oost Gelderland**
- Mr. R.J.M. Paijens

**Janssen Pharmaceutica**
- Mr. A. Lemmens, Vice President Purchasing
- Mr. D. Collier, General Management

**Netherlands Car BV**
- Mr. E.S. Henrix, Director Purchasing

**Océ Nederland BV**
- Mr. A. Bezemer, Directeur Bedrijven en Diensten
- Mr. W.H.M. Orbons, Manager Purchasing Department

**Philips**
- Mr. J.H. Bornebroek, Senior consultant, Corporate Purchasing
- Mr. W. Reddering, Management Corporate Purchasing
- Mr. M. Keizer, Purchasing Manager, Semiconductors
- Mr. J.G. v. d. Hanenberg, Chief Purchasing Officer, Sound & Vision
• Mr. J.M.J.C. Eysermans: Divisional Purchasing coordinator, Semiconductors
• Mr. J.W. Ederveen: Corporate Purchasing and Logistics Director, Medical Systems
• Mr. P. Dhawan: Sound & Vision
• Mr. P. Desmeyter: Car Systems

Stork-Wärtsilä Diesel BV
• Mr. M. Bijker: Director Procurement
• Mr. J.M. Mayer: Director

TNO Beleidsstudies en Advies
• Mr. H. Praat: Senior onderzoeker/Adviseur

Xerox Manufacturing Venray
• Mr. G.H.J.J. Hermkens: Site Materials Manager
• Mr. J.L.M. Litjens: Manager Human resources and Site Services

United States

Chrysler Corporation
• Mr. S.E. Zimmer: Director Operations & Strategy, Procurement & Supply
• Mr. J. Stechschulte: Manager Production Programming & Scheduling

Digital Equipment Corporation
• Mr. M. Sairafi: Director Storage Products, PC business unit

Purchasing Services, Inc.
• Mr. R.E. Payne: Partner
The Gillette Company
- Mr. R.A. Edwards
  Manager Corporate Purchasing

Honda of America
- Mr. D. Nelson
  Vice President Purchasing
- Mr. D.A. Curry
  Purchasing Staff Administrator

IBM Corporation
- Mr. J. R. Urioste
  Director Supplier Relations Worldwide Procurement
- Mr. J. Gillett
  Director of Procurement Europe

Northern Telecom
- Mr. D.E. Knox
  Group Director-Interconnect Corporate Supply Management

Pennsylvania State University
- Mr. J.L. Cavinato
  Department of Business Logistics

Rank Xerox
- Mrs. M. A. Guhin
  Manager, Real Estate & Capital Projects Commodity team, GP

Reebok
- Mr. B. Boodry
  Director of Purchasing

Wesco
- Mr. M. Keough
  Vice President Product Management and Supply

W.R. Grace & Co.
- Mr. M.G. Jackson
  Director of Logistics, Grace Construction Products
Appendix 2

1 Working plan

Our main research goal was to investigate the role and position which purchasing will probably have in leading-edge companies ten years from now. Answering such a hypothetical question, requires more than just desk research. Interviews with leading-edge companies in the Netherlands, Europe and the USA were therefore considered to be essential.

Our research relies on two approaches: literature study and field interviews. Drawing on theoretical predictions and management expectations, we will be able to gradually construct a body of knowledge about the role and position the purchasing function should take in large multinational companies. Our working procedure is as follows:

step 1 Exploration of the field, desk research and preparing the interviews.
step 2 Field research in the Netherlands, Europe and the United States.
step 3 Conceptualization; describing the insights drawn from the case-studies concerning the changes the Purchasing function should make in large multinational companies.
step 4 Working out final report.

2 Approach

In preparing for the discussions a list of topics was drawn up, which was sent to the selected companies. The following subjects could come up for discussion:

- dominant trends like globalizing and continually changing markets
- the effects of the new information and communication technology on the purchasing function
- changing organizational structures in purchasing; virtual organization, network-organizations
- what is the role and position of the purchasing function in your company today?
- where lies the value added of the purchasing function now and in
the near future?

- can purchasing be a professional sparring partner for top management?
- what will the future purchasing organization look like?
- training and management development programs for purchasing professionals
- outsourcing; internal versus external suppliers
- strategic cooperation with suppliers versus 'competitive bidding'
- is supply management necessary in the future?
- integration of the value chain
- empowerment of the purchasing function
- cross-functional sourcing teams
- is it possible to formulate measurable purchasing goals?
- environmental-friendly (green) purchasing
- global purchasing and the use of power in purchasing and supplier strategies.

Unfortunately, not all topics were covered during all our visits.
We started interviewing 8 Philips Purchasing Executives, followed by about 14 leading-edge companies in Europe, and 12 companies in the US. Some 34 interviews were conducted during the research project. These were held with people ranging from Purchasing managers, some general managers, Purchasing Consultants to University Professors. All interviews were recorded on tape and were complemented by documentation obtained during our visits.
Appendix 3

Purchasing Portfolio Technique (Source: Van Weele, 1994, p.119-123)

Towards strategic purchasing

It is not easy to find clear guidelines for setting up a purchasing strategy. Although the literature on this subject in the area of marketing is extensive, similar publications relating to purchasing are few. Nevertheless, an interesting approach is still the purchasing product portfolio technique, which has been presented by Kraljic (1983). Fundamental to this approach is the idea that, since suppliers represent a different interest to the company, purchasing managers need to develop a differentiated purchasing strategy towards their supply markets. In this section the purchasing product portfolio is taken as the starting point for a discussion which is then elaborated on the light of specific industrial experience.

In order to develop the purchasing product portfolio, the purchasing product assortment is analysed on the basis of two types of variables:

- the importance of purchasing to the company - the profit impact of a given supply item measured against criteria such as cost of materials, total costs, volume purchased, percentage of total purchase cost, or impact on product quality or business growth.
the supply risk - this is measured against criteria such as short-term and long-term availability, number of suppliers, competitive demand, make-or-buy opportunities, storage risks and substitution possibilities.

Combination of these variables yields a two dimensional matrix with four quadrants; these represent the product groups or suppliers, each offering different interests to the company (Figure 7.3).

- **Strategic products.** These are generally obtained from one supplier, and/or they concern products of which the short- and long-term supply is not guaranteed. Furthermore, they represent a considerable value in the cost price of the end product. Examples are engines and gearboxes for automobile manufacturers, turbines for the chemical industry and bottling equipment for breweries.

- **Bottleneck products.** These items represent a relatively limited value (in terms of money), but they are vulnerable in regard to their supply. Examples are catalytic products for the chemical industry, pigments for the paint industry and natural flavourings and vitamins for the food industry.

- **Leverage products.** In general these are the products that can be obtained from various suppliers and that represent a relatively large share of the end product's cost price. A small change in price has a relatively strong effect on the cost price of the end product. Examples are bulk chemicals, steel and aluminum profiles, packaging, steel plate, raw materials and standard semimanufactured commodities.

- **Routine products.** These products produce few technical or commercial problems from a purchasing point of view. They usually have a small value per unit and there are many alternative suppliers. In practice most items fall into this category; examples are cleaning materials, office supplies, maintenance supplies, fasteners etc.

Depending on the product segment of the portfolio, more or less extensive supply market information will have to be gathered. The emphasis will of course be on the strategic materials. The purchasing strategy will, depending on the place of a specific item within the portfolio, differ. In this way the purchasing portfolio offers possibilities with which to identify and analyse both
the commercial and the supply risks of the company in its purchasing markets. This is illustrated below.

- As a rule, **strategic products** together with the **leverage products** make up 80% of total turnover. Minor changes in price levels will have an immediate impact on the end product's cost price so that price and cost developments, as well as the developments in the supplier market, must be monitored closely. Every possibility to reduce overall materials costs need to be investigated. In general, building volume (or combining volume from different production units) will lead to better conditions. These arguments justify a central or coordinated purchasing approach. Since the company experiences significant supply risk for **strategic products**, it will strive for a 'partnership' type of relationship with suppliers of these products. Close and lasting cooperation with suppliers must be achieved in order to obtain significant improvements in the areas of
  - product quality
  - delivery reliability
  - product development and product design
  - cost reduction.

Through intensifying the relationship with suppliers of these products the company tries to minimize its supply risk as much as possible, while actively pursuing overall materials cost reduction at the same time.

- For **leverage products** a purchasing policy based on the principle of 'competitive bidding' will be pursued. Since the suppliers and products are basically interchangeable, there will be, as a rule, no long-term supply contracts. Buying at minimum price while maintaining the required quality level and continuity of supply will take priority here. Small cost savings (small in terms of percentages) represent large sums of money. At the same time supply risk is minimal because the materials requirements can be met by several suppliers. These characteristics justify an aggressive approach to the supply market.

In general, a central or coordinated purchasing approach in the form of centrally negotiated umbrella agreements with preferred suppliers is appropriate here, against which call-off orders are placed by the user and/or operating units. Price developments, changes in supply and demand must be monitored closely in order to effectively anticipate future
cost and price developments. Based on this information the purchasing strategy can be determined. Crucial questions when designing this strategy are:
• from which suppliers do we buy?
• how are we going to allocate our purchasing requirements among our suppliers?
• what time period are we going to contract for?

- The purchasing policy for **bottleneck products** should focus primarily on securing continuity of supply, if necessary even at additional cost (in this case the supplier will have a dominant position *vis-à-vis* the buyer). Activities that will be carried out in this context are:
  • risk analyses - to determine the most important (potential) bottlenecks in the short-, middle- and long-term supply
  • contingency planning - preparing measures in case one of the established risks actually occurs (for example, developing consigned stock agreements aimed at keeping stock of the materials concerned at the supplier's or the company's own premises, preparing alternative modes of transportation, actively investigating product alternatives).
  In general, measures should be taken which lead to a more balanced relationship with the supplier for the commodity concerned.

- As a rule **routine products** require 80% of the purchasing department's human resources and systems capacity. However, they often represent less than 20% of the purchasing turnover. It is therefore crucial to organize the administrative work efficiently. The handling of these products requires a purchasing strategy which is primarily aimed at reducing the logistic and administrative complexity; buyers will have to work out simple but efficient ordering and administrative routines with the suppliers of these products in the form of kitting contracts or systems contracts.
  A few aspects relevant to the policy for these products are:
  • standardizing the product assortment to reduce product variety: the selected products may be recorded in an article catalogue
  • reducing the number of suppliers
  • aiming for systems contracts for groups of MRO items (office supplies, technical maintenance products, cleaning products, catering, etc.). Instead of buying a few products from one supplier, a supplier should
be found through this approach who is willing to take over the handling of the entire product assortment

• delegating the ordering function to user departments, when possible and efficient
• reducing the number of invoices.

Decision making on each of these purchasing strategies will differ - some will require a corporate approach and active top management support, whereas other strategies may be dealt with at decentralized levels.


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